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## Peer Interaction, Cognition And Argumentative Writing (Key Stage 2 Children)

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**Peer Interaction,  
Cognition  
and  
Argumentative Writing  
[Key Stage 2 children]**

***Doctor of Education***  
**2001**

## **ABSTRACT**

Argumentative writing, which has become a National Curriculum requirement, is recognised to be a cognitively taxing undertaking at Key Stage 2. This dissertation describes an experiment using a multiple research approach to investigate 10-year-olds in peer groups of three, interacting in preparation for a written argument. This situation was hypothesised to foster logical reasoning which could affect writing quality. The study contrasts the peer support strategy with the pervasive teacher direct instruction of composition writing. It also investigates the effects of each of the two conditions on the written task. Both experimentals and controls, each 33 in number, were selected to be quasi-equal in written, verbal and general abilities.

Direct observations and talk transcripts show that the experimental participants used sustained deductive utterances and modelled the written argumentative structure verbally during their interactions. The teacher-led strategy, however, was constraining and hindered extended speech and logical reasoning. The peer learning and assistance process is explained in terms of both Vygotskian and Piagetian social constructivist perspectives.

The subsequent written scripts were close-read, compared and evaluated both qualitatively and quantitatively in terms of (a) stating and instantiating viewpoints, (b) sequencing and coherence and (c) processing content material. The reasoning at micro-level within the clauses was quantified. Findings indicate that the experimentals significantly excelled the controls' performance in both adjustment to argument form and the internal reasoning. It suggested that implementing the strategy at Key Stage 2 can be facilitating, particularly in large sized classes.

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Argumentative writing provides pupils with the means to “produce, evaluate, and act on the professional, ethical, and political discourse that is central to our democratic society” [Crammond, 1998, p230]. The generalised postulation that written arguments were toilsome had impeded their practice [Barrs, 1994]. Because of the complicated nature of this discourse structure [Freedman & Pringle, 1988], this dissertation attempts to find out whether peer assistance, when in small peer-groups, can facilitate the writing task. It suggests a practical strategy for teachers, who due to large classes, are unable to attend to particular pupil attention [Scrimshaw & Perkins, 1997; Green III & Klug, 1990]. By interacting in small groups, Key Stage 2 children would be **introduced** to argumentative structure which has become a National Curriculum writing requisite [DFE, 1995; DFEE, 1998; DFEE, 1999].

As advocated by Britton [1982, p.8], language should not be taught in “isolation from the rest of a student’s learning experiences”. Because most primary school teachers usually teach a majority of subjects, writing topics can be related to various curriculum areas. This could promote cognitive growth and the early experience of writing arguments.

Functional literacy however, is insufficient. Whereas oration in former times was considered more prestigious than writing, the current perspective is the reverse [Martin, 1989, 2<sup>nd</sup> edn, Olson, 1977]. It is now indispensable to express meaning through the written text [Olson, 1977]. Writing has become the most distinguished mode of communication [Martin, 1989, 2<sup>nd</sup> edn]. Consequently, “access to a high level of literacy is a precondition for a variety of socially valued goods, including most rewarding and well-paid jobs” [Fairclough, 1989, p.64].

Investigating approaches to facilitate children’s written arguments would thus concern not merely the practitioner or policy-makers, but also the growing

young writers themselves, who would later require well-developed written skills in higher education, for advancement in their work, hence enabling them to climb the social ladder.

### **Definition of Written Argument**

The definition used in this study is Wilkinson's [1986b] proposed reformulations and elucidations of Freedman and Pringle's [1988] model who in turn derive theirs from the classic Aristotelian paradigm. It is written discourse to state and defend a viewpoint. The writer must give reasons or explanations to support the premise. These explanations must be connected to the main thesis and have a logical reasoned sequence as well. The text must take account of both the points 'for' and 'against' the main proposition. The selected subject matter must be organised in appropriate sections and would also be fitted within an orderly outward framework to form a meaningful and undivided aggregate.

The definition is culturally biased. Wilkinson views "the nature of argument" as directed by "popular wisdom" [Wilkinson, 1986b, p.56]. This model was selected for this study because it is a culturally accepted one, and its criteria permit investigating the main items which were hypothesised to have been influenced by the peer interactions: generic structure and organisation of content material.

**Following are the argumentative writing criteria as elucidated by A. Wilkinson [1986b], divided into 3 ‘genre-specific’ categories for the purpose of this study.**

### **1. Task fulfilment**

Replying to the topic question thus stating his/her standpoint and support it by giving reasons/examples for it. These must be “developed” and “elaborated” [Wilkinson, 1986b, p.56, citing Freedman and Pringle, 1988]. The adverse side of the question should also be discussed.

### **2. Logical sequence and coherence**

The argument should be logically sequenced to form a purposeful and meaningful whole, connecting the explanations to support the thesis, thus deductive reasoning is also to be accounted for. The argument must be clear and must make sense. “There must be general coherence” [Wilkinson, 1986b, p.56]. It must also reach a relevant conclusion.

### **3. Information processing**

The writer must be able to “control his material” and “organize by associating”, thus select from the known subject matter and classify it into the composition’s appropriate sections. The quality or complexity of such processing of information should be taken into account: “classifying, generalising, speculating”. In other words the order of remembered content and the classification of information should be based on the writing purpose instead of the available content or crude “knowledge telling” [Wilkinson, 1986b, pp. 48, 52, 56, 51; Flower, 1979].

**[Appendix 1.1: Criterion 4, omitted in this dissertation.]**

### **Definition of Oral Argument**

A verbal argument is discussion in which “speakers provide evidence of reasoning -whether they make it fully explicit or not” [Phillips, 1988, p.78].

The assumption that **talk can affect writing** is accounted for because the present study attempts to demonstrate that small peer-group **talking can facilitate argumentative writing**.

That **argumentative writing requires facilitation** is justified by relating research showing that writing argumentatively is a difficult enterprise.

Reasons why children find it **difficult to write argumentatively** are discussed. **Theorists' definitions** with which the current research can identify are provided. These also demonstrate **arguments' complex characteristics** and justify the intervention.

Because of the **intricate argument criteria**, research and teachers' accounts regarding **ways to facilitate** writing, and written arguments in particular, are reviewed and evaluated. The described facilitating methods are

1. **process writing**
2. **direct instruction**
3. **expressive writing and sociolinguistics**
4. **genre-based approaches.**

Most of the indicated techniques are either found ineffective or non-realistic, thus intensifying the **need for a successful strategy**. Only **pre-writing activities** [within the process writing approach], which are preferred by practitioners, appear to assist the writer to produce arduous text. Sufficient **subject matter** is also shown to be a vital facilitator for authors to provide evidence for their premises when writing arguments.

**Teacher-directed** discourse is shown to discourage long utterances and curb reasoning due to 'asymmetrical' teacher/pupil relationships. **Peer-group** collaboration in preparation for written arguments is demonstrated to be the alternative pedagogy because the interpersonal setting fosters sustained talk,

inference and logical reasoning which are necessary to prepare for written arguments.

Two other mechanisms, shown to entail peer assistance, are elucidated: '**socio-cognitive conflict**' and '**social marking**'. They are also demonstrated to promote learning, problem solving and argumentation.

The Vygotskian perspective concerning peer support is explained and therefore shown to have implications on constituting peer groups

The underlying theoretical boundaries of the current research are finally clarified.

## *Literature Review*

### TALK AND WRITING RELATIONSHIPS

Many linguists and experts in language development are convinced that speech is likely to affect writing. Vygotsky mentions both **talk and thinking as writing preparation** [1986, new edn, pp. 242-243]: “Planning has an important part in written speech, even when we do not actually write out a draft. Usually we say to ourselves what we are going to write; this is also a draft, this mental draft is inner speech.”

The linguists, theorists and practitioners mentioned hereafter, like in the present study, contend that talk can influence written discourse. Talk as a means to foster writing is an essential and common classroom practice. The benefits of such talk during verbal planning, it is argued, is that it allows the writer to better comprehend and expose provisional considerations for text construction [Britton et al., 1975]. According to van Dijk’s experience [1989, p.33], much time is wasted in drafting. Time could be more profitably employed in talking while intentions are still being investigated and preceding being “fully committed”.

Collins and Parkhurst [1996] support the importance of determining writing objectives. They emphasise classroom intersubjective interactional situations, as does Moffett who values ‘informal talk’ which encourages argumentation needed for writing [in Muller, 1967]. Britton mentions the same teacher management activities to establish contexts of “shared experience” [1987, p.14].

Salzer [1994] identifies two forms of talk as his pupils compose with one another, and indicates their value. Text-connected talk provides the social context and support. On-task talk facilitates writing, supplying the content and



interpretation. Both these talk categories in the present dissertation are presumed to be useful to prepare for writing.

Talk is thus needed to direct what children will write [Graves, 1982]. Graves reports on a two-year ethnographic investigation concerned with young children's speech which supports and controls writing. Conversations with peers provided the writing context and helped them "rehearse" subsequent writing [Graves, 1982, p.105]. Talking to oneself during student planning of writing has also been investigated [Flower, 1988]. Transcripts show that proficient writers, who have more complex problems to resolve than inexperienced ones, can use the technique to help them. It is contended that thinking aloud is useful to alter objectives for structuring text.

Although Zoellner [1969] extrapolates and infers from his own teaching experience, he also discusses how writing difficulties can be curbed. College writers' talk can act as prompts as they draft and plan. The benefits of verbal activities before writing are that talking and writing, simultaneously, allow learners to compare between modes. Talk would help improve writing and vice versa. Conlan [1995] too, self-appraises her teaching approach arguing that certain oral contributions such as open question replies to extend speech can promote written mode structure for 4 and 5-year-olds.

Thus talk serves as a learning device, helps interpret thought and fosters understanding [Cullinan, 1993]. Pupil talk in preparation for class writing contributes to better performance. Kamler's report [1980] shows how talking during the writing process can shape composition content and surface characteristics. Fennimore [1976] shows how her pupils could produce poetic and expressive written language subsequent to unrestrained talk about familiar items.

The role of group talk during the revision phases to improve writing or to overcome difficulties has also been at centre stage [Elbow, 1973; Scardamalia &

Bereiter, 1994; Freedman, 1987]. Freedman, for example, reports on the value of peer response as feedback to unfinished text read aloud at different writing phases. The process yielded peer appraisal, occasions for revision and recalling subject matter. Freedman's study, however, did not demonstrate the influence of peer response on the final draft quality.

Sorenson [1993] recounts the advantages of her 8<sup>th</sup> Year class literature discussion, without the teacher's intervention, prior to writing about it. Like the present study, Sorenson's pupils were motivated to dispute their viewpoints orally. This incited cognitive activity to elaborate and substantiate opinions. Again, the weakness of this study is that it does not explore the effect on the written task, neither does it exemplify Sorenson's subjective claims.

Audio-recorded informal speech of six children in class writing periods for two months was categorised and quantified as part of action research [Day, 1997]. The observations indicate that the spontaneous off-task talk had an influence on what the children wrote. Due to a lack of appropriate assessment techniques, however, the influence of talk on the writing product could not be explained. A Piagetian stance is taken by Dinitz and Kiedaisch [1990]. Peer interaction is recommended before and during writing and revision of persuasive writing to enhance decentring and take account of a different viewpoint which might be the reader's. In a small scale experiment [O'Donnell et al., 1985] concerned with the writing of instructions, the collaborating student pairs had better adhered to the genre than the un-paired controls when later writing individually. Unfortunately, no records of the dyadic oral interactions were made.

Dyson [1981] reports on reception children whose talk during the writing process allowed them to distinguish ordinary speech from talk about writing. A longitudinal study by Wells and Chang [1986] found that sustained utterances could promote idea processing. Another study showed that collaborative talk, directed towards performing a task, enabled children to think, and thinking helped produce literate language [Chang & Wells, 1988]. Daiute and Dalton

[1993] observed 7 collaborating pairs at the word processor. They had successfully tutored each other as equals to write narratives while socially interacting through one another's explanations, discussions and dissensions.

Moreover, by using naturalistic observations, Dyson [1994] demonstrates how a small group of young American West Coast peers, through spontaneous social interactions, support one another to compose. Audio-recordings and script descriptions show how improving imaginative writing is determined by social and affective relationships. Pellegrini et al. [1997, p. 140] found that social affective factors in talk, which included discord and vehemence between friendly pairs of 3-year-olds with troublesome dispositions, had fostered "literate" and contemplative discourse as opposed to the non-amicable dyads. In addition, in Jones's small scale experiment [1998], friendly pairs complied with narrative form significantly better than the non-friendly ones while writing collaboratively with a special computer programme. But these results were not concordant in the later compositions. However, there was constant excelling of reasoning terminology used by the friendly pairs over the 'non-friends' in the successive writing attempts. Thus intersubjective peer talk can foster demanding cognitive written tasks. The present dissertation is also concerned with reasoning within the written text.

Like both Dyson and Jones's research, the present investigation attempts to find out whether small peer-group interpersonal interactions can similarly influence writing. However, in order to do so, the dissertation compares the two teaching/learning processes: teacher direct instruction and group collaboration. This is to find out which had more successfully affected writing. Thus an experimental research design is used. Unlike Dyson and Jones's research, this dissertation is concerned with independently written **argumentative writing which requires sophisticated cognitive skills** as reflected in the introductory definition and as will be elucidated.

Adjusting to argumentative discourse structure can be a laborious endeavour at Key Stage 2 because of its intricate intellectual attributes of classifying and assorting abstract notions [Freedman & Pringle, 1988]. A large scale investigation in a selective school in Ottawa unveiled that merely 12.5 percent of the lower secondary pupils were able to write organised arguments [op. cit.]. Experimental research in North America indicates that 10 to 14-year-olds encountered difficulties in producing 'expository' and opinion writing texts [Bereiter & Scardamalia, 1985]. What is most taxing of all is to cope simultaneously with the two tasks of recalling content and organising it [Flower, 1979; Bereiter & Scardamalia, 1987]. This is why intervention in 10-year-olds' writing was believed necessary.

Several large scale studies researched 5, 8 and 12 Year pupils' narrative and argumentative writing [Freedman & Pringle, 1989]. The tasks were assigned a few days before the written performance, giving ample time for drafting and re-editing, thus resembling habitual writing procedures. The topic question formulation, although open, defined the genre which the pupils were expected to use as well as its purpose. Given the complicated criteria, a rudimentary model was used to base the script assessment on: stating a premise either distinctly or tacitly and giving reasons to support it. The subsequent text analysis demonstrated that the older pupils adjusted better to the form than the younger participants. It was found that whereas pupils gradually became proficient in narrative writing, merely 50 percent had successfully complied with argument criteria at the end of their schooling.

The Crediton Project, which investigated four writing styles in 30 children at each of 7+, 10+ and 13+ stages, confirms that the older pupils complied better with the form. It reveals that classifying skills did not appear until the age of 13 and merely in very few compositions. Only at 13+ were pupils better able to 'abstract', derive conclusions and generalise by providing tangible reasons.

However, there was no indication that the children were able to 'theorise' or be 'critical' of their own 'thinking', and merely 25 percent took account of their opposing viewpoint [Wilkinson et al., 1980].

Applebee et al.'s [1990] U.S. national writing achievement report endorses that an extensive pupil proportion was unable to dispute disagreeing viewpoints. By evaluating the persuasive scripts of 200 pupils of four age-groups, Knudson [1992b] argues that younger children are not as sensitive to audience expectations as older ones, which is a reason why they miss the opposing view. Reports on other studies confirm that children are unable to refute opposing opinions. Nine-year-olds in one study could neither reconstitute an argumentative text whose sections were jumbled, by using the word processor mouse, nor separate arguments from counter-arguments [Roussey et al., 1995]. This deficiency is determined by unfamiliarity with the topic, the tendency to support one's own side of the issue, the likelihood to consider socially accepted stances and, finally, the social context in which the argument is produced [Roussey et al., 1999].

## **WHY CHILDREN FIND WRITTEN ARGUMENT DIFFICULT**

Innumerable other interconnected explanations account for difficulties in writing arguments. These can be summarised into 4 main points:

**children's undeveloped written skills; pervasive enculturation into narration; neglect and inadequate teaching; onerous criteria involved.**

### **Speech and writing**

First of all Bereiter and Scardamalia [1987] clarify that children have to pass through 'transitional' phases, from conversational skills to written discourse and from the narrative form to argumentation. However, research findings unveil that children are knowledgeable about arguments. McCann's [1989] three

studied age-groups showed they were practised in recognising arguments, but this was not true for their performing skills because of the abrupt change which children must undergo [Bereiter & Scardamalia, 1987]. The mutation is from direct social interaction with interlocutors where the child would adjust according to the received feedback to communication with a lacking listener. Wells and Chang [1986, p.127] show that, even during “monologues”, the speaker constantly adjusts to the listener’s reactions. Learning to operate independently [or “autonomously”], therefore, entails dislodging the assistance provided during verbal exchanges and restructuring the original strategy [Bereiter & Scardamalia, 1987, p.57]. It is stressed that the word “autonomously” should be distinguished from the expression “autonomous text” which Olson employed to differentiate speech from writing [Olson, 1977, p.272]. Both terms, however, are related to written text in the sense that writing does not rely on contextual cues. Moreover, according to Roussey et al. [1995], coping with both arguments and counter-arguments in writing, which in verbal communication are shared among participants, is problematic when performed on one’s own. These explanations account for the difference between speech and writing. Therefore, whereas talk is a “dialogical” or “dialogic” co-operative activity which relies on other participants’ responses and involves portions of co-operative text at each turn-taking, writing is a sustained text performed solitarily [Volosinov/Bakhtin, 1986, cited in Wegerif & Mercer, 1997a, pp.49, 52; Bakhtin, 1981, cited in Barnes & Todd, 1995, p.136] .

### **Narration and argument**

Children’s argumentative text has therefore shown to be brief due to adherence to the turn-taking principle of conversational style. Premise and reason written by novices are produced as one turn-taking and compositions can stop there, but could continue with one more turn if cued for the purpose. This is ascribed to the writer’s anticipation of the reply to the viewpoint that s/he has put forward, as is customary in verbal argument [Bereiter & Scardamalia 1987]. However,

the longer narrative text is attributed to implicit common agreement for more lengthy story turn-takings [Sacks, 1976, in Bereiter & Scardamalia, 1987]

Substantiating Heath's depiction [1982; 1983] of mainstream children who are nurtured into early literacy, it is contended that the ability to narrate is due to being familiar with this form of discourse when very young [Freedman & Pringle, 1988; 1989; Wilkinson, 1986a]. Young children are not given the opportunity to read arguments. Unlike story-writing, arguments require different complex cognitive and rhetorical techniques. In addition to individual performance, a child must remember relevant subject matter and must be capable of positioning it into appropriate sections to constitute a rational sequence of ideas within the larger framework. Theorists point out Vygotsky's [1986, new edn] indication that these mental activities can only be completely developed during adolescence [Freedman & Pringle, 1988].

Research indicates that 12-year-olds start surmounting the obstacles by using the "knowledge telling" temporal sequence of writing down information as it is recollected, rather than by classifying it, thus resembling narration [Bereiter & Scardamalia, 1985, p. 102]. Wilkinson et al.'s Crediton Project [1980] somehow endorses this contention, finding children's texts to be generally anecdotal, mingled with sketchy reasoning portions at 10+. By requesting participants to recall how their subject matter was acquired, Scardamalia and Paris [1985, p. 7] also found that these inexperienced writers worry more about what they should "say next" than how they should use information appropriately.

### **Teachers' handling of argumentative writing**

It is therefore not surprising that the large scale Canadian investigation reveals that pupils tend to employ 'exploratory' or 'ruminative' writing to help them compose. The reasons for this insufficiency are attributed to a need for efficient revision approaches, a deficiency in a matching paradigm and finding it taxing to 'abstract'. The tendency to entreat feelings rather than argument is due to being

exposed to the media's 'advertising' rhetoric. Lastly, the habitual pre-writing discussion instances do not provide novice writers with the "centre, direction, focus and structure" of written arguments [Freedman & Pringle, 1989, p.82].

Not only in the classroom has argument been overlooked. In their report on the 1981 Cross-moderation seminar, Stratta and Dixon [1982] harshly reprove current formulation of exam and upper school task topic questions. In this and another paper, they give evidence of topic questions more than often requiring tasks which are too taxing to handle, especially in testing circumstances [Dixon & Stratta, 1982a]. Questions are too general and discouraging. Based on the close reading of large samples of school and examination compositions, it was inferred that pupils and examiners were lacking in an appropriate and consistent definition of written argument. It was recognised that the pupils went about their written tasks unequipped, quickly and without help [Stratta & Dixon 1982]. Thus argumentative writing is presumed difficult because a prototype is lacking, because it is not facilitated and not adequately taught. Likewise, Prater and Padia's study [1983], in which 140 children wrote with topic question prompts, shows that persuasive writing is believed difficult because of insufficient practice.

Already in 1967, it was discovered that primary school children were producing such massive amounts of stories that the Plowden Report tried to advocate other styles [Barrs, 1994]. At the Dartmouth Conference, where British and American participants discussed standards for English teaching, there was a disregard for impersonal writing [Muller, 1967]. Still in the late eighties, Martin [1989] observed that in New South Wales, primary children seldom practised arguments, an activity which merely occurred 0.5% of writing time.

Funded projects initiated action-research, games, oral and written activities in 20 schools within York and Hull [Andrews, 1993; Clarke, 1995]. This was believed to settle problems of argument writing and its quasi-negligence by the



curriculum and schools. These projects are small in number, in my view. Moreover, funding is not essential to engage pupils in written argumentation.

## **Argument models**

To resolve the definition problems mentioned above, Stratta and Dixon [1982] distinguish between two types of argument, that which entails performance or conduct change in response, and that which encompasses judgements, viewpoints, thinking and logical concepts. The present dissertation is concerned with the latter “communicative purpose” [Swales, 1990, p.58].

However, a wide range of models have been prescribed and considered. There are also inconsistencies as well as overlappings in identifying and defining essay, persuasive, opinionated and argumentative structures. For example it is often referred to as “exposition”, “expository” or “factual” writing [Bereiter & Scardamalia, 1987, p.251; Martin, 1989, 2<sup>nd</sup> edn, pp.16-17]. Some researchers have categorised it within the ‘transactional’ modes [Britton et al., 1975; Martin, 1986; Collins & Packhurst, 1996]. It has also been vaguely situated within the ‘impersonal’ [Muller, 1967] and ‘non-chronological’ forms [Houghton, 1992]. It is necessary to emphasise that this dissertation is not concerned about how these written forms might be classified or referred to by our culture, whether they fall under the same genre category because of their commonalities, or whether they each constitute a particular genre. The word “genre” in the present dissertation, for practical purposes, will be used to denote a particular style, structure, form of writing or “discourse”, as Gee [1989, p.7] would say.

The toilsome features of argumentative structure proposed by Wilkinson [1986b, pp.53, 56] [and these will be the characteristics that are applied to this research] consist of formulating one’s standpoint, stating the different “relevant” or appropriate points of the argument and supporting the main claim in a rational sequence to form a meaningful consistent “whole”. Like the rhetorical configuration usually found in classically structured essays, “the statement of a

thesis.....antithesis” and “synthesis” [Graddol et al., 1994, 2<sup>nd</sup> edn, p.230], the writer must consider “both sides of the question” [Wilkinson, 1986b, p.56].

Besides the logical reasoning needed to justify one’s premise, Wilkinson draws on Freedman and Pringle’s argument attributes [1988]: the writer’s premise should be substantiated and explicated. These activities require the writer to “generalise”, “abstract and conceptualise” which are arduous skills. The depicted circumstances do not occur “in the street outside, but are abstractions in the head” [Wilkinson, 1986b, pp.52, 54, 56].

Adam [1992, p.109] describes a simple model around which more complex characteristics can be built. It consists of two basic constituents:

1. presenting a viewpoint, supporting it with reasons
2. providing counterpoints before finally concluding with ‘therefore’ or modifying the original claim. These two argument sections are connected by “mais” or “pourtant” [French ‘but’ and ‘however’, respectively].

Based on text analyses, for Martin and Rothery [1981, p.11,12], argument embodies a “proposition”, a succession of supporting explanations and a short concluding re-statement of what was written. It develops subsequent to descriptive writing or “report”.

Argument criteria are different from those of persuasion. Jim Martin [1989, 2<sup>nd</sup> edn, pp.16, 17] identifies two forms of “exposition”. The “hortatory” recommends and is persuasive. “Analytical” writing, however, such as in this study, elucidates. It is characterised by its high lexical density, verb nominalizations, the use of the passive and as being “impersonal” or objective. These traits contribute to subtle reasoning. Martin is Hallidayan in his emphasis. He is concerned with genre overall structure as well as how language “functions” in these specific “social contexts”. The current study does not particularly focus on lexical and grammatical characteristics, but does consider the “impersonal” component of argumentation. Martin’s criteria are relevant because they stress onerous argument linguistic aspects. “Explanations” in

expositions give reasons why, to defend or “justify attitudes” [Martin, 1980, p.10; Martin, 1989, 2<sup>nd</sup> edn, pp.44, 62, 11]. Like Wilkinson, Martin is interested in logical reasoning, which he discusses in terms of connectives within the clauses. This aspect of Martin’s linguistic features was considered to measure reasoning within the children’s written arguments in the present study.

Applebee et al. [1990, pp.70, 75] similarly distinguish between writing “to convince” and writing “to take a stand...and argue a position”. However, they are both called “persuasive writing”. In the present dissertation, the term “argumentative writing” will refer to that which is elaborated by Wilkinson [1986b] and “persuasive writing” as writing generally aiming to ‘convince’. For Britton et al. [1975, pp.94-99], persuasive writing is supported by argument to change the reader’s viewpoint and give reasons why. Arguing involves hypothesising, and deductive reasoning leading to generalisations to make new claims, thus, like for Wilkinson and Martin, it entails logical sequencing and cognition.

Hence, subject matter is to be organised in certain ways in order to form a reasoned sequence of ideas. For the above-mentioned theorists, the writer is to have the ability to position connected ideas within their relevant locations and, as Wilkinson mentions, *to form one complete structure*. Vygotsky’s explanations can be used to define Wilkinson’s argumentative structure. They can also elucidate what the organisation of subject matter entails as far as the writer’s cognitive input is concerned. Associating and classifying items necessitate thinking in complexes which is achieved in several stages [Vygotsky, 1986, new edn]. Whereas thinking in complexes is simply contextual, performing the same tasks with the use of language involves abstract and subtler operations [op. cit.]. Classifying requires the writer to determine what is common among a collection of items [Wilkinson, 1986a]. Generalising and synthesising also presume competence “to abstract, to single out” particular shared characteristics among an assortment of elements. As performing the same tasks also require language to express them, it is also difficult to implement one

type of concept in a different situation than was initially produced and to interpret it verbally in a decontextualised or “purely abstract plane”. These mental operations develop completely during adolescence [Vygotsky, 1986, new edn, pp.135, 142]. “If I follow chronology I get to the end of the story: but nothing takes me to the end of an argument except logic” [Wilkinson, 1986a]. It was found that only the adept adult would write with “goal-directed planning” [Bereiter & Scardamalia, 1985, p.99]. These are the reasons why argumentative writing, for middle-school children is a tedious undertaking and finding a practical facilitating strategy is essential.

Lastly, it is necessary to mention Toulmin’s argument form [1958]. He refutes Aristotle’s model as being too simplistic. His intention is to achieve a more refined paradigm to the standard used in law courts. Although Toulmin’s attributes are trendy on the other side of the Atlantic, it was not selected for this research. Argument consists of first, a Claim which can also be presented as a Conclusion. The Conclusion, beginning with ‘so’ is a settlement to the problem. But the argument can also be formulated in a reversed manner, and could include ‘because’. This depends on the direction which the argument takes. Second, in an argument there is the Data [directly or tacitly stated] to explain/justify the Claim. Third, the Warrant, a general statement, which can be presented with ‘since’ allows the Data to be tied in with the Claim/Conclusion. It can be asserted either ambiguously or clearly depending on the emphasis needed to convince. Depending on the Warrant’s implications or strength, the Claim/Conclusion can be formulated accordingly – with a Qualifier such as ‘necessarily’, ‘probably’, ‘presumably’. The Warrant’s Backing, although optional, strengthens the argument and renders it more plausible. A counter-position or “Rebuttal”, would serve to corroborate or authenticate the Warrant. All these items would lead to a “valid” or convincing conclusion. Toulmin is concerned with “micro-arguments” which would probably be comprised within the larger framework of a “chain of arguments” [Toulmin, 1958, pp.100-101, 141].

The present investigation studies sustained written texts, which contain both a claim and a conclusion as well as explanations within the composition structure, all of which contribute to the text coherence. Toulmin also describes 'Analytic argument', a shorter argument version with a missing warrant used by the non-proficient. Crammond's research [1998] confirms that children generally do not actually need Warrants because they are not aware of their audience. McCann's [1989] research also found that Warrants were absent in 6<sup>th</sup> Year compositions.

*An experiment similar to mine involving, however, sociology students in an American university, demonstrates significant improvement in supporting written opinions after debating in small groups during a semester [Green III & Klug, 1990].* However, text assessment was based on arbitrary, numerous undefined criteria such as clear argument, organisation, observable structure, text accomplishment, cohesion. Various lexico-grammatical and mechanical features were also considered as well as the argument's logic on the basis of dependable data. Besides, the study was small-scaled.

The written text criteria in the present study are **argument-specific** only and based on a distinct model in order to discern more effectively whether the pupils had complied with the form, thus find whether the pedagogy experimented on was facilitating.

## **SEARCHING FOR EFFECTIVE FACILITATING STRATEGIES TO IMPROVE WRITING and ARGUMENT**

Previous research designed to find effective ways to instruct written argument and specific written discourse structures can roughly be divided into several instructional trends: **process writing; direct instruction; sociolinguistics and expressive writing; genre-based methods**. As will be elucidated in this section, apart from pre-writing activities, research indicates that most, if not all, other

methods were found inefficient. Subject matter, however, is vital to enable writers to support viewpoints.

## **Researching the writing process**

Seeking effective pedagogies, as far back as the 1970s, focused on the importance of the composing process as opposed to product [Freedman et al., 1987; Britton et al., 1975]. The process approach stemmed from a response to exigencies concerning written text rules when pupils were not given effective directions as to the manner of carrying out the tasks. Assessment was based on the completed text, its precision and how it contrasted with the provided model. It also disregarded creativity and innovation [Caudery, 1997]. Process writing proponents were spurred by the consciousness that written language was too intricate to evaluate accurately. For process writing advocates, the text's background and its merits were to be acknowledged [Freedman et al., 1987].

In the hope of finding effective methods, the writing process was researched as an approach to understand how writers wrote. This shift in emphasis was characterised by investigating cognitive activity during writing. Both **planning** and **revising** phases were explored through case studies, naturalistic observation and thinking aloud techniques [op. cit.]. These helped confirm process phases and construct a model which was not really exclusive but also determined by the writer's idiosyncrasies. For example, by investigating the process, it was found that writers' revisions were repeated within various phases of the writing procedure. Differences between competent and inexperienced writers' problems were outlined. Also, pauses during writing revealed the types of planning which the writer experienced [Hayes & Flower, 1980; Flower & Hayes, 1980; 1981].

Linda Flower's [1979] case study depicts organising and processing content material without a draft as a strenuous activity. She distinguishes between 'writer' and 'reader'-based prose. The former is written down speech representing the untrained writer's thinking with concern about producing text

rather than taking account of the reader. Reader-based prose, however, is attributed to the capable writer who intentionally communicates with the reader. Findings have served to stress the importance of drafting to facilitate adjustments for explicitness. Claims and assertions were therefore based on those small non-representative population samples and restricted participant age range, mainly students and adults, and on a limited form of text [Freedman et al., 1987].

The writing process can consist of a number of stages comprising planning, solving writing strategy, drafting and revising stages [Caudery, 1997]. Britton et al. [1975, pp.22, 25, 32] observed a “conception” phase which induces writing, as well as a “premeditation” and a “production” phase.

Freedman et al. [1987, p. 26] claim that researching the writing process at the outset had not investigated “the social contexts within and through which these processes develop”, thus teachers’ purposeful mediation in assisting the writer. Research on the effect of process-directed writing on writing achievement had been lacking. Nevertheless, many process writing features mentioned hereafter have been considered by researchers and practitioners as facilitators for onerous text. The present study explores and compares preparation phases of the process in two specific social situations, in a teacher-led condition and in small peer-groups, to find which had better facilitated performance. Wilkinson’s [1986b] criteria were used in relation to the completed written finished product. The writers in the current study, were not involved in drafting or revising in order to exclude any other factors which might have influenced the writing apart from the verbal preparation.

### ***Voice, creativity, freewriting***

To promote writing, some process approach proponents stress the writer’s ownership. Pupils are therefore encouraged to choose their own topics to give space for individual expression [Caudery, 1997]. At the Dartmouth Conference,

the Anglo-American predominantly English teaching specialists emphasised the motivation of personal creativity: “personal writing is...perhaps the best way, to improve the basic skills of writing and achieve a mastery of language.” [Muller, 1967, p.124].

Graves depicts how teachers and children work together through the process, “shaping material toward an end” [Graves, 1983, pp.6, 162]: the children’s choice of topics; effective teacher/child conferencing; helping the child through the draft and revision phases; publishing. However, he adds another individualistic tone to the process approach: creativity and the “human voice”. Elbow [1973, p.6], who addresses adult writers, suggests “freewriting” exercises within a teacherless class [or workshop]. Learners read one another’s writing, discuss and provide direct feedback. They rather learn from their own mistakes. Contrary to the above process-writing characteristics, the present study aims to implicitly introduce children to argumentative writing. Without an intervention, the child would probably remain oblivious of its existence.

### ***Writing intent and pre-writing activities***

Another regarded task facilitator to help cope through the composing process and to develop competence is to write for a purpose. The Bullock report [DES, 1975, in Czerniewska, 1992; Stibbs, 1979] stressed that children were inclined to be accurate and attentive when writing had a purpose and a designated reader. *Empirical evidence of the importance of audience consideration for successful persuasive writing* is supplied by Rubin and Rafoth [1986]. When it was realised that the single reader was the teacher, Britton advocated writing for diversified functions and audiences. He argued for practical class writing activities to enhance and improve writing by social, communicative means [Myers, 1985; Britton, 1987]. Moffett [1968, in Gilbert, 1989] also acquainted practitioners with a wide range of purposes to write for. However, according to Applebee [1984, p.577] one reason why research relating writing to “reasoning”



had lagged behind was due to regarding writing as dependent on an “audience”.  
The present research deals with the effects of talk on reasoning and writing.

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The writing process is pictured as being a limitless undertaking. Its value consists of the teacher’s assistance and devised activities throughout the process. Favoured facilitating techniques are teacher-organised “pre-writing activities, such as group discussions”, and others made to fit children’s competencies and curiosity. Writing is presumed to “grow out of other experiences and not to exist in a world by itself”. For argumentative writing, there would be socially provided prompts to remember subject matter and encourage reflexivity and problem solving. They would convey the writing purpose and help produce extended text. Interviewed children admitted that suggestions such as “I think...”, “for example...”, “even though...” had helped them produce content. This essential facilitation would thus help recall and process information [Scardamalia & Bereiter, 1994; Bereiter & Scardamalia, 1985, pp.101, 104; 1987, pp.62, 63].

Steele and Steele [1991, p.41] found that a 4<sup>th</sup> Year class had gained self-confidence, learned how to organise information and write arguments willingly due to a speedy and easy pre-writing technique called “clustering”. “Clustering” is defined as writing down the key word or words, and around them, any word or phrase that comes to mind. The procedure is followed by linking related words which might be used within a paragraph. This is regarded as a thinking process and serves to relate formerly known knowledge with new information.

Doltz’s [1995] article on an experimental study in Switzerland, concerns children aged 11 to 12. It emphasises the importance of the first text before any type of direct instruction. The facilitating activities following the preliminary attempt included **ten 90 minute sessions** in exposure to argumentative situations and a variety of argumentative texts. The treatment pupils were immersed in interactional activities as well as the learning of specific argument structure. They were thus implicitly able to compare their first draft with all the

features of argument encountered. The controls were confined to normal instruction. Finally, all the children wrote a revised composition version considered as a post-test. In normal classroom situations, however, all the ten activity sessions would be time-consuming and impractical in preparation for only one piece of final writing product. Moreover, the proposed topics, in my view, are not appropriate for novices. Half the children were asked to take a lawyer's stance in defence of a court case. The others were required to pretend they were working in a local authority and justify the importance of a project they personally wanted realised in their supposed town in Central America. This was placing children in unfamiliar, adult-like and simulated conditions. It is not surprising, therefore, that activities of such long durations were needed to produce significant improvement of only one composition.

For primary school children, Hoffman [1996] gives practical advice on how children can attempt to write persuasively. Her recommended pre-writing activities include reflecting on ways of persuasion, writing down viewpoints, listing explanations for attitudes, and strangely enough, writing down narratives to justify arguments. Debates and considering contrary opinions are advocated. She suggests that coloured cards be used to write viewpoints, reasons why, and examples. The cards, later arranged sequentially, would serve to classify and order information.

O'Rourke and O'Rourke [1983] equate 'pre-writing activities' to a planning phase, such as showing and commenting on video-recordings of real arguments, categorising cards containing argument and narrative markers and comparing discourse structures. In the present research, interacting in small groups was also 'pre-writing activity' within the process writing context.

But planning can also encompass the drafting stage of the writing process. Drafting can change as a composition evolves. However, writers might also use verbal discourse to replace written plans. Children, though, were found to begin writing with little hesitation. It appears that children do not write plans even if they were motivated to, although planning might diminish the intellectual pressure of genre constraints. An experiment, featuring four conditions of motivational planning, including video-film, reveals that planning notes written by 10-year-olds are quasi-indistinguishable from their ensuing writing [Bereiter & Scardamalia, 1987].

### *Self-management approaches*

Self-management techniques while writing are therefore advocated to help writers control subject matter. Also, it appears that “knowledge telling” helps perform the task when pupils are unable to do otherwise, but the approach does not solve the problem. Bereiter and Scardamalia [1987, p.250], like Hillocks [1987], distinguish between the use of “rhetorical” techniques and personal control of writing. Improving the former assumes a main framework within which the writer can operate. It is the handling of the material within this main structure which is difficult for the writer [Bereiter & Scardamalia, 1987]. It is contended that acquainting children with self-handling procedures has long-term benefits. These strategies would establish writing objectives, recognise difficulties and find solutions. Composition criteria would be appropriated by directly employing the technique during the writing process phases **while** writing takes place [op. cit.], a meta-cognitive, reflexive procedure [Flavell, 1979].

### *Effects of self-managing strategy*

One self-operating approach experiment revealed that children realised the composition goal set task by being provided with the ending sentence of the

composition and working towards it [Bereiter & Scardamalia, 1987]. The children's interactions while planning showed that their proceeding was better focused towards the objective than an ordinary topic activity or when the first sentence was provided. However, in an experiment to investigate counter-argument, Brassart [1989] employed the first as well as the ending statement, both of which were opposite in meaning. The participants who did not join the induction programme of training, drafting and revising found it difficult to comprehend the task purpose.

### ***Facilitation through revision by self-management procedure***

Whereas pre-writing in the common classroom has proved to be stimulating and useful to writers, pencil written as opposed to word-processing, drafting and revision can be tedious, dull and unexciting [Davies, 1989; Daiute, 1986]. However, an experiment shows that university students were efficient in revising text organisation when instructed how to do so. Revision might also be claimed successful when verbal response is involved, or when other peers help in re-drafting a poem. However, revision "does not receive a good press from research" [Wallace & Hayes, 1991; Freedman, 1987; Gere & Stevens, 1985; Sommerville, 1989; Wilkinson, 1986b, p.32].

Bereiter and Scardamalia [1987; Scardamalia & Bereiter, 1994] report on their own and colleagues' interventions on revision referred to above. They were designed to foster the ability to self-assess, identify anomalies and amend writing within a self-operational context. The revision process was investigated, given that children's revisions are minimal, limited to mechanical features and since children find it difficult to take account of the reader's perspective when they do revise.

In one study, the experimental pupils evaluated and identified problems and eventually remedied as they were writing **one sentence at a time**, sentence after sentence, using recommendation cards. This was an iterative unnatural

procedure, thus inappropriate, complicated and impracticable. The children were distracted by the breaks. The changes made were minimal. Moreover, no significant differences were found between target and control pupils. In none of the studies did the pupils demonstrate improvement in organisational skills. This is conceded by the researchers who state that ‘knowledge-telling’ was not entirely relinquished. Despite their equivocal findings, the co-authors claim that children need knowledge and exercising in identifying anomalies. These activities are seen as “a precursor to the second order operations by which such perceived difficulties are remedied” [Bereiter & Scardamalia, 1987, p.296]. This remains to be demonstrated. Van Gelderen [1997] in Amsterdam investigated similar revision techniques whose findings were also indeterminate. It appears that what is lacking in these interventions is the human, **interactional**, intersubjective factor, essential for successful meta-cognition, leading to self-directional learning [Brown & Campione, 1979]. The present study provides interpersonal conditions where children in small groups of 3 can verbally interact in order to be cognitively stimulated, within the pre-writing phase of the writing process, not during the revision phase.

Activities providing “criteria” for composition appraisal and revision hints are reported to be effective for “understanding discourse knowledge” as identifying discourse structure and writing are two different undertakings [Hillocks, 1984; 1987, p.78]. Daiute [1986], however, found that an attached self-handling re-editing software which lists questions and criteria to the user was more efficient than the normal word-processor.

### *Assessment of process approach*

After the above review on research and practitioners’ suggestions to facilitate writing and written arguments through and within the writing process, there is a need to evaluate the process strategy. The ‘pre-writing phase’ of the process has demonstrated its efficacy in providing a variety of activities to prompt subject matter and promote writing. However, although the process approach might

permit teachers to support pupils to achieve successful “final texts”, White and Arndt [1991, in Caudery, 1997] explain that as a result of successive feedback and revision, process writing might not provide sufficient opportunity for personal ways of reflecting. Additional ensuing dilemmas will arise: that of not knowing what to assess, “the product or the process” [Caudery, 1997, pp.14,16]. The present investigation advocates facilitation through the pre-writing phase, through peer rather than teacher/pupil interaction. Re-editing was avoided to exclude any extraneous influence other than that of the peer-group or teacher-led talks. The text in this study was not used to provide feedback to the child, but to determine how talk might affect writing.

### **Direct explicit instruction**

Direct instruction as another method to facilitate writing has been observed. Burkhalter [1994] experimented a **3 week instructional programme** for persuasive letter writing of 4<sup>th</sup> and 6<sup>th</sup> graders using a **process approach**. The evaluation, according to Toulmin’s model, showed that boys had problems as opposed to their corresponding controls. Scardamalia and Paris [1985] compared two learning situations and their effects on written argument. The compositions written by the 10 and 12-year-olds who had received **extensive instruction** in argumentative discourse by the experimenter, in small groups, not in constrained classroom conditions, had diminished in quality at post-testing. Those who were **only acquainted** with the generic characteristics had improved only marginally. The co-researchers suggest that direct instruction is an inadequate strategy and call for more efficient tutoring techniques.

Knudson [1994, p.221] compared effects of four conditions, one of which was verbal instruction, on 3<sup>rd</sup> and 5<sup>th</sup> Year pupils and found negligible outcomes despite the participants’ engagement in “recitation/discussion” persuasion with peers or teacher-researcher. Although Knudson confuses argument with persuasion, she suggests that research should focus on other types of interaction such as role-taking or “simulations”. In the present dissertation the peer

interactions had, through replies to the topic question, inevitably positioned the pupils in real argumentative circumstances.

The above findings confirm that the pervasive instructional approach of specifying rules or requesting children to apply rules, is neither considered sound nor efficient [Bereiter & Scardamalia, 1987; O'Rourke & O'Rourke, 1995; Wood & Middleton, 1975].

### **Sociolinguistics and expressive writing**

Rather than being directly taught, the concept of sociolinguistics brought about implicit ways to facilitate writing. The approach specifies that writing is a situated activity, dependent on the social context which determines how language is communicated. The "triangle" connections have been employed, to explain how writing operates. Writing is a means of communication, and the discourse changes according to the 'function' of language use, with the consideration of the author, the reader and subject matter [Britton et al., 1975; Kinneavy, 1980, pp.40, 44]. According to Britton et al. and as stressed at the Dartmouth Conference, developing the expressive 'function' naturally leads to the poetic or transactional style [Myers, 1985; Muller, 1967; Britton et al., 1975; Britton, 1982]. Therefore situated writing and the practice of expressive writing would naturally foster the non-narrative form. Prater and Padia [1983] define expressive writing as being personal, exposing emotion, opinion and the writer's understanding. Classroom-practice experience and qualitative research have reported strategies leading to written argumentation through expressive writing. What the authors mentioned hereafter have in common, whether they are convincing or not, is that they emphasise the relationship between expressive and argumentative writing.

For Nancy Martin [1986] children can be prompted to write expressively for real purposes, so that *finally the children are tacitly induced into writing persuasively*. She illustrates how children are involved in expressive writing as

they report on and analyse their direct observations. However it is unclear how children playing on their own can be capacitated to use transactional styles.

Like Collins and Parkhurst [1996], O'Rourke and O'Rourke [1995] consider expressive writing as a developmental phase to other more culturally demanded formal styles but are ambiguous about the manner in which this is achieved. O'Rourke and O'Rourke, base their argument on Ochs's [1983] sociolinguistic view that 'planned' communication is situationally determined. In this transfer from personal to impersonal, the expression of an 'opinion' is a pretext for pupils to arrange points rationally and convincingly. This is relevant to the work of the present dissertation. The phrasing of the topic question requires the writer's real personal opinion which would lead to its deliberate and purposeful support. However, in the current study, expressing a viewpoint is not related to 'expressive writing'. These co-authors describe compositions in terms of "communicative voice" which is not defined and refers to different aspects of writing every time it is used. Argument criteria are not specified and the meaning given to effective writing is conflated. Positive effects of the intervention planning activities are not sufficiently established. So 'moving with ease between' Ochs's unplanned/planned continuum mentioned by the co-authors is not demonstrated. In Wilkinson's opinion [1986a], expressive writing cannot be a 'stage' because it is a different form of writing. Samples of children's scripts in this dissertation [**Chapter 6**] confirm the claim and demonstrate how expressive writing is distinct from argumentation.

Dixon and Stratta [1982a] recommend that pupils be introduced to argumentation through expression of personal experience by 'exploratory' and 'ruminative' writing, which Freedman and Pringle [1989] complain their investigated children had done instead of writing arguments. It is not understood how "narrative" and the telling of experience lead to "generalisations" and "argument", but it appears that expression could lead to argument when the text is subjected to re-editing. Like in the present research, however, pupils would be



exposed to verbal conflicting opinions during class ‘discussion’ to foster argument, acquire ways of reasoning logically and ‘generalise’.

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Berner and Boswell [1995] also emphasise ‘expressive’ writing as they praise their university’s writing programme. However they are for a *laissez-faire* procedure, using an Elbow-like “freewriting” collaborative approach [Elbow, 1973, p.6]. Written argument is referred to as a “burning issue” in the chapter title because of the students’ personal urge to write about subjects that mean a great deal to them. However, their argument illustrations are inconsistent with Wilkinson’s standards. The authors do not give credible evidence that their method is either unlike process writing or “effective” [Berner & Boswell, 1995, p.193].

Britton and his colleagues are critically spoken of by socio-linguists Martin, Christie and Rothery [1987] who contend that it is the manner in which the teacher organises the writing situation which determines what children will write, not ‘personal expression’. My stance is in conformity with the position that writing argumentatively would be socially determined by the teacher’s planning of the context [setting up the small peer-group situation] to perform the educational task.

Another sociolinguistic approach is described by Nicholls and Wells [1985]. They argue that like “register” in verbal communication, a writer writes for a specific reader and inherently accommodates the written form to suit the writing purpose or situation [Halliday, 1978, p.223]. The pedagogy is unspecific. The authors merely suggest that generic conventions are learned by providing children with reading and writing situations and attempting different genres by giving children ample space to make mistakes.

Leaving children to themselves, Czerniewska [1992] would reply, by depending on conjecture and personal inquiry, thus by trial and error, to find out about writing through their reading, is doing an injustice to children who endeavour to achieve “the cultural practices of writing” [op. cit., p.145]. Also reacting to some process approach proponents who advocate authorship and freewriting characteristics such as ‘creativity’, ‘voice’, ‘individuality’, ‘imagination’, ‘personal expression’ and other imprecise parameters for composing, Gilbert [1989; 1992; 1994] makes a similar statement. Such indefinite and indistinct guidelines for writing, she continues, result in discrepancies between teaching practices and prescriptions, thus confusing the teacher as a reader and text evaluator. Likewise, the learner has difficulty in adjusting to indefinite teachers’ demands and reading customs. Inghilleri’s case study [1989] illustrates two ESL students’ confusion due to their teacher’s unspecific recommendations and inability to evaluate according to merit. Gilbert’s [1989] examples of unsuccessful instruction in Australia, call for new effective pedagogies through which genre would be explicitly taught. Gilbert obviously seeks change but does not specifically propose how this could be accomplished.

### ***Genre-based writing***

In response to their colleagues, the Deakin University linguists [Martin et al., 1987] advocate a particular writing pedagogy, by which the model form is demonstrated to the pupils, taught in stages, thus splitting the text into sections for facilitation purposes, explains Hillocks [1987], and then imitated. Martin, Christie and Rothery propose that teachers first set the circumstance for writing, that the model text be shown and that teachers, through interaction with the pupils, review its particular structure. The operation is followed by collecting information on the topic, note-taking and summarising, drafting, discussion, re-editing and publishing.

However, Martin et al's [1987] paper contains an illustration of argumentative writing whose characteristics are totally different from those delineated by Wilkinson [1986b], those depicted by Martin on his own [1989, 2<sup>nd</sup> edn] or by Martin and Rothery [1981] mentioned earlier. "Results of the Crusades" does not contain the abstract and intellectually complex traits and appears to be comprehensible to 10-year-olds [Martin et al., 1987, pp.61, 62].

A three year longitudinal ethnographic study involving transcriptions of video and audio recorded lessons are the basis for Cambourne and Brown's research [1989, p.47] to investigate a genre-based manner of teaching various discourse structures to 3<sup>rd</sup> and 5<sup>th</sup> Years. The teacher's pedagogy, within rotating two week periods of reading, writing and oral activities, consisted of absorbing the children with reading material of the same register before the extracts were discussed or imitated. The co-authors praise the teacher's incentives and enthusiasm to the point of bias. Peter is mentioned as "one of many children" who were making steady progress. From the two illustrated compositions, Peter appears to have benefited from the teacher's activities. Who had taught him in Year 4 and when he started the programme are not mentioned. How the other pupils fared is not divulged.

### ***Assessment of genre-based pedagogies***

To understand a model argumentative text according to the criteria proposed by Wilkinson [1986b] would require ten-year-olds to perform an onerous and irksome task. Gee [1997] explains that the complex operation of comprehending decontextualised, abstract concepts poses a problem for children, who must first relate to realistic items they know before transcending to the unfamiliar. She confirms children's difficulties of applying a concept in a context different from the one in which it was acquired [Vygotsky, 1986, new edn]. The genre-based pedagogy has already been disputed on the grounds that it was not rendered more intelligible for pedagogic use [Callaghan et al., 1993, in Gee, 1997]. Shifting from "theory to practice" was found difficult, because coping with "the

abstract” prior to the familiar, interfered with appropriate pedagogic methods [Gee, 1997, p.36]. Regarding argumentative writing, I believe a ten-year-old would have to resolve the problem of determining which opinion to consider and support: the model’s or her/his own. Moreover, a majority of the teachers who tried the genre-based strategy, did not fully understand it. Changing genre learning methodology to the process approach proved more successful [Gee, 1997].

The new genre pedagogy devised by Knapp and Watkins [1994, in Gee, 1997], is commended on the basis of its “relevance” to education requirements, knowledge of the culture, and as a source of “language” consciousness. Its weakness, however, is that it appears to be “difficult to implement because of the conceptual demands” made on both the teacher and the pupil [Gee, 1997, p.39]. Chapman [1999] suggests that models be introduced to promote understanding of discourse structure as part of the writing process rather than for the purpose of achieving a product which resembles the model. Hillocks [1987, p.76], too, delimitates knowledge of form from knowledge of writing “procedure”. The basically experimental research review which follows confirms that genre-based strategies of learning from model reading are not effective.

### ***Model reading strategy experiments***

Several studies involving different age-group samples, compared the effects of model reading with other teaching approaches on writing performance. A small scale study, for example, showed that when participants were introduced to the structure once, they made progress in linguistic features and content but **not in genre attributes** [Church & Bereiter, 1983]. Following this indecisive investigation, Bereiter and Scardamalia [1984] studied a variety of conditions for different age groups to acquire several written forms from model reading. The results also remain inconclusive, one reason being that learning is dependent on prior understanding and comparative knowledge of what has been

exemplified in the reading model. The other reason is that one illustrative text is insufficient as discourse structure involves more complicated intertwined characteristics which cannot be internalised by just being exposed. I would add that Wilkinson's [1986b] argumentative criteria are much subtler than the forms elucidated by these co-researchers.

Couzijn [1999], in Amsterdam, tested two situations, learning argument application by performing **exercises** and learning by **observation** of model writers and readers as they analysed texts. The observation method showed better transfer at post-testing. However, the technique is too complicated to implement due to the logistical drawbacks of video-recording all the writing and analysing procedures which the learner is supposed **to observe**.

In replicating one of her studies, Crowhurst [1991] finds that neither the 6<sup>th</sup> Year children who were taught by reading nor those taught by writing practice, had made effective progress at post-testing in other persuasion techniques apart from the simple structure and linguistic aspects. Exemplifying the genre by diagrams and feature identification, was followed by 10 instructional lessons within a 5 week period. At post-testing, both reading and writing groups wrote longer compositions This was attributed to the addition of connectors and conclusions, and explaining and repeating reasons, but not to the number of reasons presented. Crowhurst's findings imply that reasoning to substantiate opinions cannot be instructed since they are a function of subject matter. The children were thus lacking in information to generate. Therefore, learning by reading text models or writing practice could not cater for the intellectually demanding side of the written task: reasoning to instantiate viewpoints.

Similar conclusions are derived by Knudson [1991,1992a] who carried out two studies because her Doctoral dissertation had yielded unsettled results. She investigated the efficacy of four instructional approaches, two of which involved introducing a model. In both studies, instruction was effected during **20 minutes per day for 14 days**. The 1991 investigation concerned 4<sup>th</sup>, 6<sup>th</sup> and 8<sup>th</sup>

Year pupils' persuasive writing, age-wise and gender-wise. Text assessment according to 6 categories of 'content' and 'form' showed that the younger children's capabilities had diminished when the programme discontinued. The inconclusive results do not indicate whether they are attributed to a reasoning deficiency or to inadequate training. In the current research, I have set up a situation which would allow the children to engage in cognition and logical reasoning as elements which would supposedly support the children's argumentative writing. The written task was preceded by **a single approximately 20 minute talking session** among peer-groups of three.

In Knudson's [1992a] later study of two upper school age-groups, all four methods produced marginal differences in composition writing, between pre and treatment-ending written tasks. However, the third composition written two weeks after the intervention was judged to be the most satisfactory because it contained more convincing 'warrants' which were interpreted as determined by the **familiar subject matter** employed.

## **Subject matter**

As demonstrated, of all the facilitating approaches explicated so far, it appears that pre-writing activities are the most efficient to help learners adapt to genre constraints. In addition, argumentation could be facilitated by the type of subject matter used. *In the present dissertation, the preparation for writing in peer groups was investigated within the pre-writing context of the writing process.* Because subject matter is believed to be crucial for argument writing, the following paragraphs attempt to illustrate its importance.

### ***Subject matter to support propositions and facilitate argument***

Knudson, above, emphasises the necessity for content known to the writer. According to children's accounts the main difficulty in producing extended text is connected with a lack of **subject matter** [Bereiter & Scardamalia, 1987].

Freedman and Pringle [1989] stress that subject matter which is already structured would help. They base their contention on large scale research and Vygotsky's assertions. They indicate that children are more competent in organising content material when writing about a topic already covered and discussed during school lessons in particularly constructed ways rather than treating ideas stemming from individual experience. This is because informal everyday questions are dealt with impulsively rather than rationally. The authors thus propose that writers utilise known information which has been handled in a culturally valued discourse form. This is, in a way, related to the present study. The chosen topic questions were tied in with History lessons, but could also have been used in conjunction with other areas of the curriculum.

However, Roussey et al. [1999, p.179] in southern France, studied 113 samples of 10 to 13-year-olds. In sentence completion tasks using 'because', the children, irrespective of age, had provided a higher number of reasons in support of favourable premises than negative ones when they were consensually socially valued: "People think that doing homework is **good** because ..." [negative: "... **bad** because ..."]. It was also found that the children had better supported the viewpoints whose topics they were less knowledgeable about, such as 'travelling' and 'drinking', rather than 'eating sweets' and 'doing homework'. Most of the researched children had never travelled abroad, and none drank. The implications therefore are that children might more successfully tackle subject matter tending to be compatible with social consensus, but they can also handle information with which they are not very familiar. Perhaps this signifies that the topic's choice should be one whose content material is challenging rather than insipid. This was intended to be the case in the present study.

Bereiter and Scardamalia [1987, p.64] also found that 4<sup>th</sup> and 6<sup>th</sup> Year children's familiarity with the topic did not necessarily yield more information than "unfamiliar" topics. The participating children also recognised this fact. Nevertheless, reports on two other French studies [Coirier & Golder, 1993, p.172] provide quantitative evidence that writing, subsequent to "class" debating

on current disputable issues, such as pollution, has allowed participants to include a wide range of opposing opinions in their compositions. These results greatly contrasted with the other samples whose topics were too formal [“conservation of weight”] or even personal [“getting an allowance before the age of 15”]. Thus children perform better when using meaningful subject matter.

Guiher-Huff’s [1990] college students practised different genres by using the prevalent controversial issue of pollution. They researched the topic which finally emerged into successful persuasive letters actually used as formal petitions. Hence the writers were immersed in realistic situations.

Hillocks reviews an experimental study in which the teachers’ provision of information for “inquiry” and simulation to induce university students to write argumentatively was more effective than using models [Troyka, 1974 in Hillocks, 1984, p.154; Hillocks, 1987, p.78]. In my research, the pupils have not pretended, but have genuinely argued, the content resources being accessed from their History repertoire. Likewise, Wyandotte [1996] advocates arguments as investigations in which students take part for realistic purposes. True information would be found to support personal viewpoints by employing social, cultural and curriculum-related topics. The students would engage in activities which motivate argumentation, such as a pretend trial or meeting in groups, to be exposed to the varied participants’ opinions before drafting began. However, Wyandotte illustrates and describes written texts which she is excessively convinced are effects of her own action research projects.

### ***Use of subject matter in context***

Freedman’s naturalistic study researching how law students accomplish the writing required by their discipline, indicates that students neither learn by direct instruction nor by being introduced to a model. Writers appropriate the required form through implicit ‘collaboration’ with their teacher. The teacher ‘performs’ or acts out the legal argument and the students take part in the interaction,



before they can produce the task individually without the teacher's help. The process is in application of the Vygotskian pedagogic duty transfer concept [Freedman and Pringle, 1989]. The topic question was to be designed in such a way as to allow the law student to write within the 'context' of having to produce the designated argument. The topic question in my research was formulated with similar objectives. It was also meant to be stimulating and to catch the children's interest.

Also for Dehler [1996], who addresses teachers of mature learners, ability to process subject matter is dependent on the precise phrasing of topic questions. It would require the writer to reply to the question's particular features and classify items accordingly. The articulation of the topic question would affect written argument, Dixon and Stratta [1982a] assert, if questions specifically formulate that the writer should provide reasons for the stated opinion. The topic questions in the current study was phrased in a manner to lead the children to use argumentation and organise subject matter when replying to it: "give reasons for your preference and say why you disagree..." [Appendix 2.2].

### ***Amassing subject matter***

In their paper critiquing examination questions, Dixon and Stratta [1982a] also emphasise the teacher's responsibility in undertaking the task of ensuring that pupils learn to argue by controlling the amount of subject matter needed. Rather than using already learned and handled information, such as Freedman and Pringle suggest, Dixon and Stratta propose that learners look for information and classify the main points in 'diagram' form, or plan, from which concepts are selected according to personal judgement. The co-authors, therefore, consider content material to be important because the writer is dependent on information to substantiate an opinion. The writer also needs knowledge concerning the different possible facets of the argument. However, rather than simplifying the written task by using information already stored in the head, the children would

have to be busied with another heavy burden, that of collecting the relevant content.

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My stance is that the topic question is provided and prepared by the teacher, and that the selected content, like Freedman and Pringle, would emanate from a familiar already structured section of the curriculum in order to supply evidence for a viewpoint. Moreover, following Roussey et al.'s and Coirier and Golder's research, information boring to children would be avoided.

## **CLASSROOM UNEVEN DISCOURSE COMPARED WITH INTERSUBJECTIVE PEER COLLABORATIVE SITUATIONS**

The facilitating techniques and writing activities discussed so far are teacher-directed. For example, Bereiter and Scardamalia [1985] argue that the process approach is compliant with Vygotskian theory, where the teacher carries out the difficult task up to the time when the child is enabled to appropriate it. So is the genre-based method, as advocated by the genre-theorists, where the tutor, to transmit expertise, "scaffolds" or supports the child by interactional means and shares the activity [Bruner, 1988, p.95]. However, based on Maclure's study of 5 to 6-year-olds [1986, in Czerniewska, 1992], Czerniewska discloses how the bargaining procedure between teacher and child, by employing the question and response approach to induce writing, may repress children. Uneven teacher/pupil relationships are revealed. This verifies classroom interaction research which finds that the pervasive "IRF" ['initiating' question, "response" and "feedback"] discourse framework is teacher-monopolised [Edwards & Mercer, 1987; Sinclair & Coulthard, 1975, p.21]. Teachers' questions are usually closed and aimed to assess whether the replies will match or measure those of the teacher. Children do not feel as comfortable with teachers as they do with parents as there are less interpersonal relationships between them. Pupils are less inclined to ask questions to teachers, unfold knowledge, or employ extended deductive utterances. Hence, teacher/pupil interactions hinder reflection and reasoning, as

will later be elaborated. Classroom talk fails to conform with principles of ordinary verbal discourse. Another factor is large class sizes. Teachers' questions, to maintain classroom communication and requiring specific replies, are regarded as constraining and harmful [Sinclair & Coulthard, 1975; Edwards & Mercer, 1987; Edwards & Westgate, 1994, 2<sup>nd</sup> edn; Wood 1991; Donaldson & Elliot, 1990; Tizard et al., 1980; Wells & Montgomery, 1981].

In contrast with classroom situations which hamper thinking and reasoning, interpersonal contexts, among peers, are indicated to promote sustained speech, **inference, deductive reasoning and problem solving**. Based on Vygotsky's [1991; 1994; 1978] premise that verbal communication generates cognitive activity, and conversely, in social interactional circumstances, experts on children's learning and cognition have taken comparable positions. The social situation in which language is employed affects the learner's **speech and abstract thinking** [Labov, 1988; Halliday, 1978; Lloyd, 1990; Wood, 1988; Tizard & Hughes, 1987; Azmitia & Montgomery, 1993; Bernstein, 1971]. Genuine communication requires "equality between speakers" [Freire, 1973, in Elsasser & John-Steiner, 1977]. To prepare for written argumentation, therefore, the current investigation explores small groups of children interacting informally as equals, a situation which promotes mental reasoning in contrast with the teacher-directed discourse which tends to preclude it.

Research shows the benefits of these intersubjective settings and their effects on cognitive functions and learning as compared with stiff, uneasy uneven child/adult circumstances. Piaget's constrained experiments of children carrying out *decentring tasks attended by an unfamiliar experimenter*, reveal that children were mentally inept and unable to take others' perspectives. However, Margaret Donaldson demonstrates children's capacity to understand and reason in informal conditions where talk is purposeful. These situations are shown to foster unconstrained, lengthy and **elaborate utterances** [Donaldson, 1971; 1976; 1987, 2<sup>nd</sup> edn]. Children have performed better at Piagetian tests in casual

circumstances involving a teddy bear than responding to the experimenter's misconstrued questions [McGarrigle & Donaldson, 1975].

Morag Donaldson [1986] reports on her own and other studies regarding children's deductive statements when performing sentence completion tasks. The studies provide evidence that young children are both cognitively and linguistically capable of comprehending and producing 'explanations', thus of using causal connectives. In contrived circumstances such as in the classroom, however, these utterances are hard to achieve. Margaret Donaldson [1987, 2<sup>nd</sup> edn, p.89] argues that ability to generate these "disembedded" or abstract statements suggests that one must have meta-cognitive competencies.

Other studies emphasise the virtues of learning activities in partnership and through verbal interaction. O'Donnell et al.'s [1987] experimental study, which involves 93 students, confirms the benefits of co-operation. Their investigation is built on earlier research such as Spurlin et al.'s, [1984] which concerns effects of co-operative learning on knowledge transfer, recalling and other aspects of cognition by planned, prepared proceedings. Paired learning conditions were found more effective when one was led to attend to the particular learning features required by the partner, than learning settings without specific goals. These manipulated paired learning situations caused less emotional stress than the unregulated conditions, and had a positive influence on the amount of remembered information. In the case of Spurlin et al.'s study, the context fostered an eagerness to learn among the participants. The present investigation involves an organised, informal co-operative setting among peers, the goal being replying to a specific topic question. It is also concerned with implicit co-operative recalling of previously transferred subject matter due to the need to back personal opinions. Written arguments involve recollecting information to provide evidence to support viewpoints and these involve hypothesising and making inferences, thus mental reasoning. There is, therefore, reason to believe that these written reasoning skills would emanate from informally articulating

these modes of talk verbally among peers. The oral reasoning produced in small groups was assumed to be indispensable to get ready for written argument.

By investigating 10 to 12-year-olds' interactions in small groups, Phillips [1985] discerned several talk categories, all of which engender different types of thinking. Argumentative discourse was found to promote co-operation and reflection to support an opinion. Speculative, hypothetical speech detected by markers such as 'if' and talk to narrate experience were both revealed to compel each interactant to take account of what the partner had uttered, resulting in jointly produced text. Since reflection, evaluation and sequencing originate from such conditions, it can be presumed that these modes of thinking are also required to prepare written arguments.

Supporting Phillips's [1985] and Barnes and Todd's [1977] investigations on the benefits of group collaboration, one of Maclure's [1994] motives to foster talking in class is that it intensifies learning and understanding. As Vygotsky's [1978; 1994] theory indicates, talking is essential to control cognitive functions, facilitate problem solving and enhance abstract thinking. Learning is achieved by social means, using language which is a thinking medium. Moreover, to achieve individual performance, a child can be assisted when led by an adult, but also by a more competent peer, provided that the task concurs with the child's potential learning aptitude or "Zone of Proximal Development". The less able partaker can thus improve with the more experienced peer's support [Vygotsky, 1994, p.54; 1991; 1978, p.84]. Intersubjective interactions among peers can also attenuate problems of uneven relationships between pupils and teacher and can enhance learning [Maclure, 1994]. This is compatible with Piagetian theory that collaborating children can make cognitive advances [Youniss, 1983; Tudge & Rogoff, 1989].

Hughes [1990] and Fisher [1994] highlight the adult's role in co-ordinating and grouping peers to interact and collaborate. Based on Donaldson's [1987, 2<sup>nd</sup> edn] meaning of 'disembedded' thought, Hughes emphasises the inherent virtues

of learning in social settings where pupils direct their own thinking and are therefore conscious of it. For Fisher, achievement is dependent on the supporting teacher who **encourages** group dependability and establishes an appropriate problem solving situation to befit the children's aptitudes. Webb et al. [1995] studied the nature of help obtained when in small groups and its influence on mathematical problem solving. Findings indicate that received aid was efficient when it was detailed and explanatory. Research also suggests that an interactant's repeated act of explaining also intensifies her/his own comprehension and performance [Webb, 1982; 1989]. The derived implication for classroom practice is that teachers should set up conditions in which children might communicate with expanded reasoned statements within small groups to promote productive and useful peer interaction [Webb et al. 1995]. This was one of the essential goals of the current dissertation.

Barnes and Todd [1977, p.49], who first disclosed the benefits of peer-group collaboration for learning objectives, audio-recorded 13-year-olds working together on diversified tasks. They argue that successful learning takes place when discursive topics are "meaningful". As regards written argument, this is endorsed by many mentioned investigators in this literature review. Children would mentally be apt to produce arguments with the incentive of asserting "their views on subjects they feel strongly about" [Freedman & Pringle, 1988, p.241]. Wilkinson [1986b] also stresses the writer's enthusiasm and sincerity. The present study compares both learning/teaching contexts, the pervasive teacher direct instruction approach and the experimented peer group interactional process.

## **CONFLICT AND SOCIAL MARKING FOR PROBLEM SOLVING AND TASK PERFORMANCE**

So far, the merits of pupil collaboration have been discussed. In addition, however, to produce 'meaningful' intersubjective communication, research

demonstrates that speakers should have opposing opinions and experience “socio-cognitive conflict” in normal, uncontrived situations. These settings would also foster learning and mental reasoning, thus enabling children to use deductive explanations [Perret-Clermont & Schubauer-Leoni, 1981, p.220; Donaldson & Elliot, 1990]. Moreover, explanatory statements alluding to social norms during interactions foster understanding of the task. The following section elaborates the ‘conflict’ and “social marking” mechanisms, demonstrating their value and their connection with argumentation [Light & Perret-Clermont, 1991, pp.145].

### **Socio-cognitive conflict**

The process by which a higher degree of understanding is achieved is explained in Piagetian terms. ‘Socio-cognitive conflict’ is a mechanism by which different opinions or know-hows are bartered through interaction among individuals so that gaps might be bridged and intellectual functions might be increased [Doise et al., 1975]. It is a condition of “tension” which leads to personal adjustment or “equilibration”, a state in which the person builds upon earlier mental activity and as a result, develops novel ways of thinking and reasoning. These, subjected to further imbalance or conflict of beliefs, can in turn extend rational behaviour and so on ... [Berkowitz & Gibbs, 1985, p.72; Johnson & Howe, 1978, p.239].

Experimental collaborative Piagetian conservation tasks, initially performed in Switzerland, have shown to facilitate the learning of conservation, due to mutual taking account of the partners’ opposing stances [Doise et al., 1975; Doise et al., 1976; Light et al., 1979; Mugny & Doise 1978; Light & Perret-Clermont, 1991; Perret-Clermont & Schubauer-Leoni, 1981; Light & Glachan, 1985; Garton & Renshaw, 1988; and others].

Johnson and Howe’s study [1978] evaluated seventy 11-year-olds’ cognitive-conflict efficiency which would encourage mental reasoning needed to appropriate the notion of area conservation. Areas of pasture and gardens were

represented by blocks and geometrically cut cardboard. The children were asked whether areas were equal. The study shows that

1. exposed to conflicting viewpoints of pairs of children, a conserver and a non-conserver, promoted mental reasoning.
2. interaction between peers learning to conserve, as opposed to self-training, showed not only that they were able to conserve at immediate post-testing, but also one month after the intervention.
3. those who conserved before the peer interaction learning session did not decline in their level of conservation after having been confronted with non-conservers.

Light and Perret-Clermont [1991], investigating peer interaction influences on learning and testing, entailed a designed three-phased conservation test operation used as a medium for thinking. Findings reveal that those children, who engaged in interactional games with peer conservers, demonstrated better improvement in the Piagetian liquid conservation task than the controls who did not participate in the paired conference. In this rivalling, yet co-operative, decision-making “socio-cognitive conflict” context, each participant had to take account of the other interlocutor’s conflicting standpoint to solve the conserving problem.

Like the studies explicated above, it was intended in the present investigation, that by replying to the topic question, the interacting children would each state a personal opinion. It would be challenged by the other partners who would have taken account of the speaker’s perspective to be able to respond. The children would therefore be engaged in solving the topic-question problem through verbal argumentation and ‘conflict’.

In replicating their own positional arrangement experiment with 6-year-olds, Mugny and Doise [1978] tested various paired learning conditions. They found that the learning level varied according to the existing form of conflict between the pairs. One set of results concerned accomplishing the task together in pairs.



The other regarded progress after having performed. The findings show that performance quality is ascribed to the presence of a more able partner within the pair. This is analogous to Vygotsky's concept [1978] of tutoring by a more able peer. The post-tests to determine whether the individual child had internalised the mechanism produced a variety of results which are attributable to more intricate factors. It was corroborated that children working together attained higher levels of achievement at post-tests than children solving the problem individually, provided there was disagreement and discord within the communicative session. Thus both conflict and a higher attaining partner are necessary for successful outcome, conditions which were anticipated in the present study. From a Piagetian perspective, conflict is necessary to develop cognition but children of similar intellectual levels are believed to develop more intersubjectivity and are therefore more productive. However, numerous investigations with a Piagetian outlook, as described above, have joined conserving with non-conserving participants, which conforms with the Vygotskian strand of thought on including a more expert peer [Wood et al., 1995].

Socio-cognitive conflict can take place during verbal discourse any time participants present "differing solutions", whether right or wrong. This is convenient for argumentation in which case individual viewpoints are concerned. The mechanism involves cognitive activation by the partner [Light & Perret-Clermont, 1991]. To promote learning and task performance, children, in this case, can transact as equal individuals [Mugny & Doise, 1978; Phillips, 1985; Perret-Clermont & Schubauer-Leoni, 1981, p.230]. Experimental studies confirm that "countersuggestions" and contradicting propositions made to children by adults have a cognitive influence on interacting participants [Doise et al, 1976; Perret-Clermont & Schubauer-Leoni, 1981, p.230]. Light and Glachan's [1985] second 'Mastermind' problem solving experiment verifies that effective talk results from settling differences by verbal argumentation input. Observations, though, reveal that children versus adult socio-cognitive conflict situations are less likely to help task performance due to the social differences

between them [Perret-Clermont & Schubauer-Leoni, 1981]. This is why the children in this study were expected to be led to write argumentatively by experiencing socio-cognitive conflict when on a par with one another.

### **Social marking**

Berkowitz and Gibbs [1985] report on studies which provide evidence that conflict in discussion of **moral** problems among peers also encourages reasoning and cognitive development. Moreover, children's conserving tests indicate that "social marking" exchanges connected with familiar social and moral norms and standards ["equality", "fairness"] contribute to task facilitation and comprehension. This was exemplified in experiments through which the liquid conservation concept was transferred to a non-conserving child by collaborating with conservers and pouring 'equal' servings of juice. The children thus used their moral notions of 'fairness' to clarify the conservation involved [Light & Perret-Clermont, 1991, pp.145, 146; Doise et al., 1975].

Again Light et al. [1979, p.307] create an effective interpersonal conservation coincidental situation where pairs are involved in a "competitive game". Standards of equality were reminded at the beginning of the game as the children had to be given equal amounts of shells to be positioned. However, Skon, Johnson and Johnson [1981] find that, regardless of which ability formation a 1<sup>st</sup> Year group of three would be, collaborative interactions to resolve mnemonic and reasoning problems fostered greater cognitive attainment than the competitive situations. This is due to the mutual assistance and rational tactics involved during the interactive sessions.

Nevertheless, Forman and Cazden [1985], including Grossen [1994], are critical of the methodology used notably by the Genevan theorists who examined problem solving situations by peer interaction. Flaws in these investigations lie in their lack of analyses of interactional processes. The findings in reality rely on the post-testing technique to check whether the children had internalised the

process. Mugny and Doise [1978] though, do claim that the interactions in their study were filmed. To know more about the characteristics of learning through conflict of beliefs and have a sound understanding of the peer-tutoring approaches, the researcher needs to observe the interactional procedures within their social situations [Grossen, 1994; Crook, 1994, 1999].

*The collaborative process has been observed, analysed and accounted for in the present study. In essence, it is not a competitive situation, despite the presence of a more able peer. It only becomes one when each child contests the other with a personal viewpoint which is not similar. Explanations of opinions have also been examined. These were often found to be substantiated by using examples of ‘social marking’, norms and models accepted by society, to be more explicit and to be understood by the other participants. Thus the learning produced was assumed to grow from the children’s co-operative activity as well as their conflicting positions.*

## **PEER SUPPORT**

*The Vygotskian outlook on peers supporting one another during collaborative tasks have implications on constituting peer groups.*

### **Assistance**

Forman’s ungeneralisable study where experimentals solved Chemistry problems in pairs is reported by Forman and Cazden [1985] to indicate that the pairs who collaborated were more efficient at solving the problems than the pupils working individually. But this did not necessarily require one peer to be more proficient than the other. Moreover, the participants had rarely displayed socio-cognitive conflict which was only at the concluding stage of the task in the case of obtaining disparate solutions to the problem. These researchers thus prefer to use a Vygotskian perspective in their analysis rather than a Piagetian one based on ‘equilibration’. This is also because of the social dimension of Vygotskian

concept. Social verbal interactional situations affect mental activity and cognitive progress. Their explanation might sound contradictory as a Vygotskian position entails tutoring by a more knowledgeable 'other'. It was observed that children were playing "complementary roles" which means that they were both "peer tutoring" each other [Forman & Cazden, 1985, p.341]. In reality the **peers were mutually 'scaffolding' one another**. This has shown to be true in several situations in the present investigation, where some least able children were leading the discussions.

But this is not always the case. Roussey and Gombert [1996, p.287] used equal ability pairing of 8-year-olds, the Piagetian combination, to facilitate "counterargument" awareness. On a computer, they reconstituted a basic argumentative text whose statements were jumbled. The task was facilitated in the experienced paired condition. The less able pairs were unable to support one another. Hence, there are various views as to how to constitute peer groups.

### **Peer groups**

A small-scale study, emphasising interactional procedure rather than outcome, indicated that mixed peer-groupings of "low and high attaining" children produced more tutorial talk than either "homogeneous" or "heterogeneous" groups [i.e. mixed groups with various abilities] [Bennett & Cass, 1988, p.24]. Likewise, Webb [1989] advocates groups made up of high and low achieving pupils. But in displaying relationships between group composition and both solicited and received explanatory help, she recommends medium ability groupings, homogeneous or with little ability differences. These would engender more explanations [reasoning] than heterogeneous compositions. They would produce effective intersubjectivity, contrary to mixed ability pupils where high achievers might take care of the least able children, but disregard the medium-abled.

Palincsar et al. [1989] reveal that teachers prefer to use groupings which are adaptable to the situations. Moreover, although low attaining children's writing might not be as accomplished as high achievers, their verbal participation might nevertheless be useful to the group. This was shown to be true in the current investigation. However, each peer-group was heterogeneous in ability. Among them was an able child which was in compliance with Vygotsky's [1978] peer learning theory [Appendix 2.1]. This is corroborated by Johnson and Howe's [1978] experiment where the less knowledgeable peer benefited from the more informed one in learning area conservation.

Fisher [1997b, p.24; 1994] who studied the influence of group composition on interaction efficiency in conjunction with the SLANT project, expounds general strategies. Teachers and pupils have their own perceptions as to who the bright pupils are. Although it is worthwhile grouping children of various abilities so that the lowest attaining one might be assisted when in adversity, it can be detrimental "to put together pupils who see themselves as sharing little common ground". Teachers' interviews and research show agreement in that ability plays a part in the co-operation process. However, it is recognised that there are many other factors to be taken into account in constituting peer-groups, such as personality traits, achievement pace, and working routines [Palincsar et al., 1989]. Other components are liveliness, "gender", "friendship" and "talking and listening skills" [Barry and Stewart, 1997; Webb, 1989; Dawes, 1997, p.190]. The teachers helped in constituting the small groups in the current research because of their knowledge of the children and their personalities. The reward system might also play a role in influencing performance [Webb, 1989; Salomon & Globerson, 1989]. However, this dissertation is not concerned about this item.

It is argued that group composition, genderwise affects both collaborative procedure and performance [Watson, 1997a; Swann, 1992; Lee, 1993; Wegerif, 1997; Fisher, 1997b]. Mixed-gender groupings of three were preferred for the present research because their "verbal activity" is greater than in single-sex

groupings [Lee, 1993, p.565]. Moreover, the available population was to be represented.

The present study and the conservation experiments [and similar research] are alike in certain ways. The children in small groups of three, one of whom was more competent than the other two, were motivated to solve the topic question problem. In reply to the question, each participant stated a personal opinion with which there was a likelihood of disagreement, partial disagreement or modification by other interactants. The children were bound to give explanations to justify their viewpoints. They also alluded to norms of their society to facilitate understanding. The peer interaction was an intersubjective communicative situation which was assumed to facilitate an argumentative writing task, not a 're-composition' of jumbled statements such as Roussey and Gombert's research commented on earlier [1996].

However, as Forman and Cazden [1985, p.329] specify, one must distinguish peer tutoring from co-operation. The first is viewed as a classroom situation in which children are inclined to support each other, and help improve one another's work. "Collaboration requires a mutual task in which the partners work together to produce something that neither could have produced alone." Chang and Wells, [1988, p.96, 97] would agree that it simplifies a "goal"-directed task and "empowers the learner". My learning methodology would identify with both situations as well as Webb's [1982; 1989]. During the interactions there was evidence of reciprocal support, disagreement as well as modifications of other interlocutors' statements. Moreover, both the more and less knowledgeable peers contributed to providing content material to explicate and back certain key points to write about. Thus they supplied the partners with, and made themselves aware of, the necessary information, helping the recollection of material that none would have done on her/his own.

Like Forman and Larreamendy-Joerns's [1995, p.561] observation of pairs while solving shape and shadow conservation tasks, the peer-groups in this

investigation were observed as they were interacting. This was to examine how each child had furnished new knowledge to the task, thus trying to evaluate the “cognition in context”. Gee [1989, p. 7] proposes a Vygotskian interactive approach of “enculturation”, practising new structure within an already known form and with the assistance of the skilful, like in early language acquisition. He also mentions awareness of the manner in which the discourse to be internalised *is related to the unacquired one*. This is analogous to the strategy used in the present dissertation. It was assumed that the new argumentative form would emanate from the peer interactions, an inherently familiar mode of communication.

## **PEER INTERACTION, COGNITION and ARGUMENTATIVE WRITING**

The theoretical boundaries of the research, pertaining to the current dissertation, are elucidated in this final section.

Purposeful and intersubjective communication engenders thought, fosters sustained speech and promotes deductive reasoning. Peer co-operation can replace adult cues to recall information and can influence learning and task performance. Argumentative and speculative discourse encourages cognitive activity, reasoning, inferential and hypothetical speech. ‘Socio-cognitive conflict’ and ‘social marking’, among peers, can influence problem solving, enhance mental reasoning and activate deductive statements. Children can assist one another provided that the requirements of the task match with the children’s potential aptitudes. Grounded on the above factors, it was endeavoured to find out whether, in the context of a pre-writing activity, peer assistance in small groups, an intersubjective situation, could help in the following cognitive operations: recall subject matter, induce cognitive abilities to support viewpoints, consider opposed ones with explanations and organise the acquired information to comply with written argument discourse.

Thus, there are two inseparable strands of thought regarding an individual's progress in cognitive functions, the "psycho-social" and the "socio-cultural" accomplished through interpersonal conditions [Rogoff, 1984; Grossen, 1994, p.159; Tudge & Rogoff, 1989]. The former concerns learning by social interaction within a specific, seemingly unconstrained situation, as expounded by the Genevan researchers. The culturally-grounded line of thought is the Vygotskian/neo-Vygotskian means by which the tools of the culture are socially transmitted in a variety of ways. Some examples are: "proleptic instruction", carrying out a task under more knowledgeable supervision [Rogoff and Gardner, 1984, pp.101-104, Wood et al., 1976]; 'scaffolding' until knowledge or the skill is internalised and the child can perform on her/his own [Bruner, 1988]; being tutored by a more expert person [Vygotsky, 1978].

It was attempted to observe the peer interactional processes in relation to those two social constructivist perspectives as well as the engendered reasoning. This was to find out whether the verbal interactional context might have influenced the ensuing independently written argument as modelled by Wilkinson [1986b]. It was also to determine how the peer discourse to prepare for the written argument might be different from the classroom discourse.



## *Methodology*

Although qualitative and numerical procedures used to investigate human actions represent contrary ideologies, many researchers appear to convey that one methodology is not superior to another. The defense of one's selection is based on realistic rather than theoretical motives, thus how helpful it will be to the research concern and aim [Hammersley, 1992, p.162 ; Henwood & Pidgeon [1993]. As regards the current dissertation, what is investigated is a whole discourse "system" [Stubbs, 1993, p.73]: how peer interaction can generate reasoning and recollection of relevant subject matter, how this constructed dialogue is distinct from the ordinary teacher-conducted discourse, and which of these conditions can better influence written argument discourse. Researching all these processes and outcomes therefore necessitated more than one approach.

The two conditions, peer-group interaction and the teacher direct instruction had to be contrasted. The principal purpose was to determine whether the peer interactions and the produced deductive reasoning contributed to assisting the children to solve their problem to write more effectively than the common teacher-taught lesson. The texts written by participants in these two conditions had to be contrasted. Also studied was the distinction between the two "learning/teaching" processes and the discourse characteristics which each situation encompasses. This was to try to "isolate" or identify, key common features within the peer interactions, not found within the teacher/pupil discourse, which might have affected writing quality. This can solely be carried out by using a comparative or an experimental design [Mercer & Wegerif, 1999, p.93; Stubbs, 1993, 2<sup>nd</sup> edn; Snyder, 1995]. The hypothesis-testing method was implemented, the hypothesis being that peer-interaction would be a more successful pedagogy to learn to write arguments than the direct instruction approach. Yet, in order to learn more about the social context of the learning process and the discourse features involved, the two situations were studied by

direct observation or ethnography and by being a mere observer in one case and a participant/observer in the other.

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Although the employed methodologies represent contrary epistemological strands, it was believed that research results, would be reinforced and more convincing if data were amassed and analysed by utilising a combination of methods. Moreover these different strategies were presumed justified because they would provide and reflect a more comprehensive vision of the two *observed comportments in preparation for argumentative writing* [Henwood & Pidgeon, 1993; Snyder, 1995]. These were effected, given the knowledge that “There are no methodological criteria capable of guaranteeing the *absolute* accuracy of research” [Henwood & Pidgeon, 1993, p.23]. Each of these procedures, which have both their problems and their benefits in relation to this particular investigation, will be discussed. The **general experimental framework** within which the research is situated will first be elucidated. This will be followed by descriptions of the more **specific varied procedures** within the experimental set-up.

## **GENERAL RESEARCH DESIGN: EXPERIMENTAL METHOD**

This dissertation, as explained above, tests the hypothesis that interactions within small groups would more successfully influence 10-year-old participants to handle the argumentative writing task than the conventional teacher-led situation.

The experimental approach is convenient because, in constituting the desired circumstances, these variables can be modified to increase the likelihood of achieving trustworthy results concerning whether the causal links which are being researched are dependable [Hammersley, 1992]. For example, since it was postulated that peer-group interaction would advantage children in their

argument writing over teacher-controlled classroom discourse, these two distinctive settings were organised and tried.

The experimental method is an efficient manner of contrasting the two varied processes while other variables are constant or alike [Hammersley, 1992]. Thus the method is efficient in recognising which condition has caused the difference in writing performance, since the participants in each of the two distinctive situations, were the same in number, ability and gender and were preparing for the same writing task. The approach reduces the effects of other items on the dependent variable, thus tracking and excluding other elements for the influence of small peer-group interactions on the written argument [Graziano & Raulin, 1989]. Therefore, the features which affect the outcome can easily be pinpointed [Mercer & Wegerif, 1999]. The advantage of experiments is that studies can be replicated and validated [Draper & Anderson, 1991]. Experimental researchers, though, tend to be distracted by their focus and are more likely to miss other aspects of the data [Bryman & Cramer, 1995, 2<sup>nd</sup> edn; Hammersley, 1994]. I tried to overcome the problem, despite the devised setting, by observing the investigated activities [teacher lessons and peer interactions] naturalistically, as they were happening, as will be discussed in the ‘Specific, Multiple Procedures’ item. This allowed ample scope for discovery of unanticipated behaviour [Ball, 1993].

The data were collected in primary classrooms and in small peer-group interactional contexts. The experimental participants were observed in the manipulated setting, attempting the pedagogy to be tested: interacting in small peer-groups of 3, to prepare for the written task. The controls, to be contrasted with the experimentals, were observed as they were teacher-taught in preparation for the writing, together with the remaining non-chosen children in the classroom. As mentioned earlier, to produce reliable research design, the children in the two situations were selected to be as identical as possible because findings were to emanate from independent variable differences rather than external ones [Graziano & Raulin, 1989, The Open University, 1996].

## **Sampling**

The sampling strategy was one of “convenience” in accessing the concerned institutions to which I was introduced by ex-colleagues and friends. The number of subjects, 33 experimentals [11 peer-groups of 3] and 33 controls, exceeded the recommended samples in order to provide a more probable population “representativeness”, to induce a perceptible outcome and for more ‘sensitivity’ to statistical testing [The Open University, 1996, p.181; Robson, 1994].

Data were collected in four schools in Portishead, Warrington, High Wycombe and Limpsfield-Oxted. Hereafter, these will be designated as Schools-1, 2, 3 and 4 respectively. There were two Year 5s and two Year 6s. One 6<sup>th</sup> Year was studied at the beginning of the academic year, whereas the other three schools were investigated towards the end. The samples were thus aged 10 on average. Additional data were gathered in a school in Kingston-upon-Hull and were processed. However, interviewed children disclosed that during their morning assembly, they had been exposed to the same subject as the writing topic. This and other factors were believed to interfere with the direct effect of the independent variables on the written task. Therefore, the study was not taken into account. Some incomplete, thus unused, data had also been amassed in an East Croydon school where the teacher unexpectedly refused to conduct the teacher-led lesson, which was legitimate and which I could not argue, for moral reasons [BERA, 1992; The Open University, 1991]. Moreover, the children reported that he had been instructing them in argumentative writing during the two weeks prior to my arrival. Therefore, the research would have been unreliable anyway. In my introductory letter to the schools, it had been clearly specified that the children should not have been exposed to argumentative structure.

The teachers were sent information forms to list the children's names, gender and ethnicity. They were requested to specify ratings and information under the following headings: **name, gender, ethnicity, oral ability, writing ability, general [knowledge & other] ability**. The data served as a basis to constitute the identical sets.

The control and target selection was effected by

(a) the teacher's evaluation of the children's abilities rated from 1 to 7, 7 being the highest [Goreman et al., 1988], for **oral, written and general** ability.

The evaluation was based on the teacher's personal assessment of the child's verbal and written performance. Regarding general ability, I had precisely requested the teacher to take account of both general knowledge and ability in subjects other than English as criteria for evaluation. For the School-3 and School-4 children who had different teachers for other subjects, teachers other than the English teacher contributed to the evaluation.

(b) my evaluation of the children's writing, using several samples of the same assignment for all pupils, on loose paper and in exercise books.

Only one piece of writing *per* child would have been circumstantial and not representative of all the child's writing [Dixon & Stratta, 1982b]. The writing criterion was the capacity to write articulately and elaborately only. Spelling, punctuation, neatness and other superficial characteristics were not considered. Because School-4 was studied early in the academic year, there were insufficient specimens of the children's written work. Most of the previous term's English books, contrary to what was mentioned in prior correspondence between the teacher and myself, were not in her possession. The selection of School-4 controls and experimentals were therefore based on my examining the only two English compositions written during the term, one current History essay, two recent Religious Studies assignments and the essay section of the summer term History examination.

In selecting equal controls and experimentals, I tried to create matching pairs. In School-1 and School-4, the teacher's evaluation of the children's writing was sometimes different from mine. In this case I took account of both scores. Examples of ability ratings [oral, written and general] of each experimental and matching control, and within peer-groups, are listed hereafter. The others can be found in **Appendix 2.1**. The first of the three scores [from 1 to 7] is for oral ability. The second figure is for written ability. The third is the general ability rating. [The scores in between the brackets are those containing my ratings for the writing when they differed from the teacher's.]

**SCHOOL-4**

**Controls in order of ability**

Judith 777  
Dick 756 [766]  
June 565  
Sandra 666 [656]  
Jeremy 444 [454]  
Linda 333

**3 girls 3 boys**

**Matching experimentals**

Paul 777  
Adrian 656 [666]  
Christine 566  
Daniel 644 [654]  
Pat 545 [555]  
Kim 333

**3 girls 3 boys**

**Experimentals within their groups**

**Peer-group A**

Paul 777  
Kim 333  
Adrian 656 [666]

**Peer-group B**

Christine 566  
Daniel 644 [654]  
Pat 545 [555]

To constitute the small peer-groups, it was important to consider verbal competence which the children might be endowed with to negotiate the content to be included in the writing. The written ability was to bear in mind the child's literacy potential to tackle the written argument. General ability was to take account of the child's general knowledge which could be used as resources or content material for the preparation and argument writing. I have also considered both gender and ethnicity [if this was the case] in setting up the two quasi-identical groups.

The distinct devised conditions for comparison in an experimental design, provide an unreal or “artificial” setting for observation. Consequently, those who partake in the research can experience negative effects [Hammersley, 1992, p.192; Snyder,1995]. An ethical implication is that despite agreement of children to participate, the researcher should be careful not to expose them to situations which might be detrimental to their learning opportunities [The Open University, 1994a]. The pupils in the present study were involved in preparing and then writing a piece of argumentative writing, a curriculum requirement. The teacher-led situation was a normal classroom one. However, it is likely that the observed teacher behaviour was affected by my presence. These effects, which are presumed beneficial in this study, are addressed in more detail further on in the chapter. As for the experimental circumstance, it was attempted to liken the peer talk setting to a natural interactional situation which approximates the normal rules of everyday discourse, to minimise behaviour effects [The Open University, 1996]. However, the interactional conditions did not entirely exclude the occurrence of responsive action because, in such situations, the researcher is usually a guest in the investigated school and as a result, observation is carried out more or less hastily and participants are often performing ‘tasks’ which are restricted by time [Crook, 1994; 1999].

### **Post-test strategy to operationalise dependent variable**

Because I was concerned with identifying the elements which made each observed condition different, apart from comparing both situations, it appeared necessary to compare the outcome. The written texts prepared by one condition were contrasted with those of the other setting [Snyder, 1995]. The dependent variable was therefore operationalised by the written texts which were assessed. The specific evaluating procedure will be found in the ‘Specific Multiple Procedures’ item, as this section only concerns the depiction of the experimental setting and its controversies.

Although post-tests are likened to “formal examinations” performed independently by the participants [Crook, 1994, p.140], as mentioned in the Literature Review, the written task in the present dissertation is considered to be a component of the writing process. The process begins during the oral preparation and lasts until the written performance is terminated. However the written script was assessed as a test would be, in order to check its characteristics against Wilkinson’s paradigm [1986b].

Crook [1994] points out that a pupil’s individual testing cannot reflect the pupil’s reasoning engendered in the group interactional social context. He disputes the entailed subjectivity in trying to find cause and effect relationships between two contexts which are entirely different in nature [interactive and testing]. He finds that ‘evaluating’ the ‘condition’ of the collaboration *per se* is a more reliable explication of the phenomenon than testing the participant independently in a totally different context: a testing situation which cannot reveal the same characteristics demonstrated and acquired during the interactions.

In the case of the current investigation, if solely the interactional situations were taken into account, the pupils would not have been required to write arguments at all. Writing is the result of two distinct pre-writing activities entailing verbal preparation: peer interaction and direct instruction. Pre-writing activities followed by writing is a process which pupils would normally apply in schools when writing. So is oral preparation for any other task. Thus the written arguments were assessed to determine which of the two learning/teaching mechanisms, peer interactions or teacher-taught lessons, had better led the pupils to adhere to argument structure.

The only method to demonstrate whether peer-group interaction was an effective pedagogy was to enable the children to write argumentatively. Making inferences would have entailed assumption or conjecture, whereas assessing the scripts provided “evidence” [Snyder, 1995, p.47]. The small peer groups were



set to interact for a purpose: the written argument. Whether that aim had been achieved, could only be established by evaluating the writing.

Nevertheless, trying to determine the accurate factors responsible for the outcome, is difficult. A study comparing highly-abled with medium-abled peer groups working collaboratively on a computer task can actually demonstrate linkages between certain verbal approaches used by the high ability groups and achievement. However, there is no explanation as to “how” peer verbal collaboration caused or affected “learning” [King, 1989, p.11]. As Hage and Meeker [1993] say, the mechanism or process responsible for this outcome is not known but can only be inferred. It is demonstrated that causal effects are dependent on an intricate system of social and physical operations. This is why, it is advocated that “intervention strategies should focus on social processes” and on the causes which happen before the effect and which create the alteration, rather than on causal relationships which are not verifiable [Hage & Meeker, 1993, p.90; Crook, 1994, 1999]. Theorising would therefore also require an interpretative approach.

## **SPECIFIC MULTIPLE PROCEDURES**

Varied research approaches were used within the three investigated stages.

1. Verbal preparation for the written task
2. Argumentative writing phase
3. Validation interviews

### **1. Verbal preparation phase**

The discussion above justifies the naturalistic paradigm in observing the verbal discourse. It consists of observing the process as it is happening. Proponents of naturalistic research believe that they can avoid making inaccurate suppositions by reporting behaviour from personal observation of the circumstance, instead

of conjecturing about it [Edwards & Mercer, 1987; Hammersley, 1994]. In examining events by direct observation, the researcher is involved in discovery and meaning exploration [Ball, 1993] to help identify relevant behavioural characteristics, such as reasoning instances and deductive utterances engendered by the peer interactions in the present study, as well as patterns of peer learning and assistance [Bell, 1993, 2<sup>nd</sup> edn]. These were contrasted with the controls' classroom discourse.

The qualitative approach was found justified for an intense study and interpretation of interactions among peers and with the teacher, to elucidate them "in terms of their relationship to the context in which they occur". Revealing the participants' behaviour, meanings and standpoints entails a better understanding of these social processes, basically the manner in which mental reasoning was brought about. Naturalism is also appropriate to examine small groups [The Open University, 1996; Hammersley, 1994, p.5; Hammersley, 1992].

It must be understood, though, that ethnographic observation is never unobstructed by the researcher's individual 'construction' of the observed events [Swann, 1994; Hammersley, 1994]. Direct experience of a situation can be valuable. However, the presumption is not well grounded, as truth is not derived from "contact with reality", because all perception is an interpretation of the concrete world. Moreover, knowledge obtained as a consequence of closeness to a situation, may not be complete, because one's comprehension of it may be shallow or misconstrued [Hammersley, 1993, pp.217; 1994]. Naturalistic research is also problematic in the sense that the researcher collects "a vast amount of unstructured data", in the present case, about five and a half hours of recorded talk. This was to attempt to determine the significance of the discourse in relation to the investigated questions and this is a lengthy procedure [Henwood & Pidgeon, 1993, p.21]. The initially muddled data are processed, organised, classified and interpreted according to what the researcher might believe appropriate, thus with the propensity of focusing attention on individual

concerns. This can be another reason why the strategy of collecting data as events occur might be found at fault for being impressionistic and unscientific [Hammersley, 1994; Bell, 1993, 2<sup>nd</sup> edn].

### ***Observing interactions and ensuing thinking - independent variables***

With the phrasing of the topic question to activate meaningful verbal discourse and reasoning, a naturalistic approach was judged useful to observe the peer-group interactions [Appendix 2.2]. The same qualitative strategy was employed to observe the controls' teacher-led discourse as the four teachers used distinctive techniques to tackle the topic.

To take scrupulous field notes of talk, an audio-recorder is prescribed despite its effects on participants [Bastin, 1985; Bell, 1993, 2<sup>nd</sup> edn]. A basic, battery-operated recorder was employed instead of a video-camera because it is practical, simple to use, less cumbersome and more discreet. Moreover, non-verbal behaviour was not investigated. Audio-recorders are also befitting to record small groups. A second tape-recorder was simultaneously used in case of technical failure [The Open University, 1991;1996; Swann, 1994]. Recording talk provides a basis for better notes than recollecting events and leaves "a permanent record of spoken language". Tape-recordings can be listened to for verifications whenever necessary. This was the case of School-2 Group A when interacting in the presence of loud background noise. Although the likelihood of bias is conceivable, recordings can help transcribe talk for close analysis [Swann, 1994, p.36; The Open University, 1991;1996; Langford, 1994].

Field notes were added to keep track of who was talking [The Open University, 1996]. This was accomplished by noting uttered key-words and the recorder counter number near the interactant's name as s/he was talking. Verbatim transcriptions were used to analyse the discourse [Mercer, 1991]. However, transcribing is a 'time-consuming' activity [Swann, 1994; Tizard & Hughes, 1991; Draper & Anderson, 1991]. All the talk was transcribed [except for what

was undecipherable] because the study deals with both subject matter and form, [Mercer, 1991, p.50]. The present dissertation describes interactional processes, their ensuing mental reasoning, information recalling and problem solving [Appendix 3.1: Transcription Convention].

### *Organisation and reactivity effects*

To maximise validity, observation conditions must least alter the subjects' normal reactions. The participant observer, is less conspicuous if integrated by the school staff, and brought closer to the children studied. Accessing information about them is thus facilitated [The Open University, 1996]. Establishing familiarity between the children and the researcher, at an early stage, attenuates the subjects' doubts [Bastin, 1985; The Open University, 1996]. The children wrote and coloured their names on name-badges which I had provided. Teachers and pupils addressed me by my first name, which put the children in confidence. I informed the children of the purpose of my visit, of my dissertation ["a very, very long report"], my interest in children's writing, their role in helping me learn more about their writing, thus resolving equivocal ethical problems [Dockrell, 1988; BERA, 1992]. They were thus aware that I would reveal information about them.

They co-operated well, appreciated what I was trying to achieve and were also helpful. They showed me where their classroom and library were..., carried the tape-recorders and my bag, helped with microphone plugs, turned the recorders on and off, and moved chairs and tables where I wanted them placed.

During the pilot studies, I was totally involved in the children's activities, being present with the studied classes for several days [Lacey, 1993]. However, for this dissertation, none of the schools accepted my presence for more than two days before data-collection day, despite prior negotiation. I was mainly requested to remain within the limits of the staff room or library. In School-3, however, I was invited to attend an assembly. The Year 6 English teachers were

subject teachers who only permitted that I stay with the pupils during English periods. Despite the teachers' initial agreement to assist me, two of them, at some point during my visit, showed reticence to participate, thus substantiating reports about customary "tension" "between researcher and practitioner".

However, the teachers did not retract and finally co-operated well. This settled a basic moral issue for my research. It was difficult to find consenting schools for the investigation and I might have had to be disagreeably persuasive [Foster, 1999, p.27; The Open University, 1991; BERA, 1992; Verma & Mallick, 1999]. Three schools had changed their minds after agreeing, and many cancelled my appointments at the last minute, either because of the complicated research set-up, or the teachers' reluctance to participate, which was their right [The Open University, 1991; BERA, 1992; Verma & Mallick, 1999].

Equally important is the participants' awareness of their contributions to research. However, if they are told too much about the study and its expectations, "there is a strong danger that this will affect their behaviour". Adjusting to imparting information which is sufficiently "ethically and practically appropriate to give..." was essential [The Open University, 1996, p.186; 1991, Foster, 1999]. Peter Foster is also critical about the rigidity of the BERA 'ethical guideline' number 7 which concerns informing participants about possible repercussions. He explains how complicated this might be for carrying out research. My introductory letter to the schools stipulated the research aim. Other letters prior to my arrival included procedural information: "...One class period for the teacher's lesson in preparation for the writing task. Three 20 minute peer-group interaction sessions in groups of three etc..." It was my 'responsibility' to be relatively truthful about what the study entailed and to inform the schools about possible shuffling of lessons to accommodate the research phases within the set timetable. There was also the need for a quiet place to conduct the peer interactions [The Open University, 1991; BERA, 1992; Verma & Mallick, 1999; Cameron et al., 1994][**Appendix 2.3**].

Correspondence, by mail or facsimile, to the school and/or teacher also specified that the children should not have been exposed to argumentative writing because my research concerned **introducing** argumentative form [**Appendix 2.3**]. It was essential that the participants would not be influenced by any previous knowledge of argument structure, a factor which would have diminished the reliability of the experimental design.

I was not required to give assurances about “confidentiality”, neither by the headteachers nor by the teachers. Nevertheless, for ethical reasons, I have not named the teachers. I have not designated the schools by their names, but only indicated the towns in which they are more or less located. Moreover, the pupils were given fictive names to preserve their identities, although the process was time-consuming [The Open University, 1991, p.41; Dockrell, 1988, p.63; Burgess, 1989, p.60; Cameron et al., 1994; Swann, 1994; Delamont, 1984; BERA, 1992].

A diary was kept – timetables, activities, relevant conversations and informal interviews, notes about matching children’s abilities, children’s absences, personal “reflections” – for appropriate planning [The Open University, 1991, p.41]. Printed sheets concerning provisional, modified and actual plans for the day were handed to the teacher every morning [**Appendix 2.4**]. So were lists of selected and back-up pupils or changes made. We discussed changing timetables, the topic question and the children’s abilities during the teacher’s free periods, breaks as well as over the telephone.

### ***Problems in organising the School-4 research***

The School-4 class was initially to be a Year 6 higher ability set of 18 pupils, from which 6 controls and 6 experimentals were to be selected. It was found that if 6 target children were withdrawn for the experiment, only 12 would remain to be teacher-taught in preparation for the writing. Since only 12 children did not approximate normal classroom conditions, the alternative was to

incorporate the 15 lower ability children from the other English set usually taught by another specialist teacher. The selection of controls and experimentals were from both classes and excluded any special needs or dyslexic children. These lower ability pupils knew the teacher well as she had taught them the year before.

### ***Constituting the small groups for learning setting***

As mentioned in the Literature Review, to foster effective verbal interaction, each small group of three was mixed in gender and attainment and included one high ability participant to conform with Vygotskian peer assistance theory whereby the more capable participant would support the less able partners [Lee, 1993; Vygotsky, 1978; Galton & Williamson, 1992] [Appendix 2.1].

For effective peer-group learning, certain interactional situations in which children might learn and train in talking competence are recommended [Atkinson & Green, 1990; Dawes, 1997; Webb et al., 1995]. The dissertation participants had not received any formal training in collaborative discourse, from which they would have undoubtedly benefited. However, a trial talking session for each of the peer-groups was carried out.

### ***Getting accustomed to the audio-recorder and establishing friendliness***

To reduce reactivity effects, the audio-recorder was introduced to the classroom from day one, and every child was recorded as s/he talked about him/herself. The trial peer-group sessions, although short because of time constraints, were also recorded for acclimatisation to the recorder. The children later listened to some recordings. The trial talks were held on the day prior to data-collection day. During those trial interactions several activities took place within the 20 minute allocated time [sometimes more briefly]. The activities were the following:

- In order to emphasise the informal context, the children played a game, matching animals with their descriptions [Appendix 2-6]. The game was usually interrupted in order to complete the remaining activities.
- I told the pupils that this was a trial recording to get accustomed to the tape-recorder and explained what was going to happen on the following day: they were going to talk about a subject which they would be writing about.
- The following text was read to introduce what would happen and to define some elementary rules of conversation. It was read to the children during the trial interactions rather than before the actual talks, to save time on the real interactions [it took around three minutes to read the text and demonstrate].

*"Read the question carefully. Find out what exactly is required of you. Then reply to the question by discussing the topic among yourselves. You will be talking to one another. I will not join in the discussion. I'll only be here to record your opinions. As the tape-recorder is running, I'll be looking at the counter number [pointing at counter on tape recorder]. As each one of you is talking, I'll write down the name of the speaker [demonstrating] and near it, I will note the counter number and one or two key words which you have spoken, so that later, when I listen to the tape recording and have this paper in front of me, it'll be easier for me to find out who has said what. So please don't mind it if you see me write while you're talking. However, if you get stuck or run out of ideas, I'll be here to help. If your friends don't agree with you, try to defend your point of view. However, talk one at a time without interrupting your friends in the middle of their statements [Long pause]. Now let's read the question carefully and try to express your opinion to your friends, giving examples."*

- Each peer-group, for a short time, engaged in discussing the following topic presented on printed slips of paper which were collected at the end of the trial session:

"Which of the two conditions, do you think, would be more appropriate: animals living in *captivity* or in *freedom*?"



During the real interactions, each experimental child had a printed copy of the topic question to refer to and to encourage speech [Barnes & Todd, 1995]. I collected them at the end of the interactions [**Appendix 2.2**]. The experimental children **did not take any notes**.

Not all the interactions resembled commonplace, everyday speech. Some groups more than others, showed great enthusiasm, ease and informality. At least 2 out of the 11 communicative sessions were not up to my aspirations and standard of success. It is not certain whether this was due to the presence of the recorder and/or the researcher. But it is more probable that this was attributed to the lack of experience in this type of discourse. The recordings and transcriptions reveal that the peer-group children who were at first reserved and paused for long periods became more self-confident as the interactions progressed. However apart from Rachel's fits of laughter during the initial part of the interaction in School-1, *signs of anxiety [Dockrell, 1988] were not perceptible in the children's comportment*. Time spent with them was brief and they appeared to be enjoying these unusual activities. Rachel was told that she could retract, but she did not wish to leave [BERA, 1992].

### ***Where peer interaction and lessons took place***

The teacher-led lesson took place in the children's usual classroom or where English lessons were held. The small peer-groups, however, were accommodated in various places after being withdrawn from their classroom in turns.

School-1: 'parlour'

School-2: Group A in a noisy library opened up to other classrooms

Groups B and C in the infants' library, relatively quieter, unavailable earlier

School-3: children's kitchen across the playground, quite far from the

School-4: library, also far from the classroom, in a different building

The three participants and myself were seated around a table on which the two small recorders and microphones were placed. While the controls were having their teacher-led lessons, the peer-interaction experimental children were accommodated in other classrooms.

### *Missed lessons and contributing teachers*

Making arrangements for the investigation entailed the teachers' co-operation. In return, as a researcher, I was adaptable and careful not to disrupt the teacher's agenda. Argumentative writing was a curriculum requirement and in my opinion, my presence in each school gave an opportunity for the teachers to introduce it. This allowed them to 'benefit' from the circumstance as three of the teachers were given support in argumentative writing criteria of which they were uncertain. I also think that for some of the teachers, linking English with other areas of the curriculum [History in the current case] was a novelty. Some teachers hinted that they found the experience successful. For example, the School-4 History teacher had already agreed, in my presence, to liaise with the English teacher for activities which tied in both subjects. Moreover, I anticipated that the experience was invaluable for the children as well, particularly those who took part in the group interactions because they were involved in a more enlightening activity, as will be demonstrated in following chapters. Although the peer interaction children were privileged in comparison with the controls, it is plausible that the teachers' participation influenced their own behaviour and teaching strategies when conducting the controls' teacher-led lessons, thus, in my view, empowering them to teach at their best. Therefore, it was an asset, not a liability, for the teachers and children to have taken part in this study [Dockrell, 1988; Cameron et al., 1994].

It is pointed out that discourse analysis could be a problematic procedure on account of the dense subject matter involved and some equivocal and vague discourse. Talking also comprises intended but unuttered statements as well as unobservable characteristics of participant interaction and comprehension. It is therefore recommended that the researcher be guarded as to the personal data construction. This is why it is claimed that talk cannot be ‘measured’ as a stimulus for learning [Draper & Anderson, 1991]. However, it was necessary to compare the experimental peer verbal interactions with the controls’ classroom discourse. Both were **qualitatively depicted** and interpreted to show their distinctive features in relation to the contexts in which they were produced, in order to examine and contrast the ongoing learning and supportive processes [Ely et al., 1991, in Blaxter et al., 1996; Hammersley, 1994; Crook, 1994; 1999].

Processing recorded talk permits the collection of numerical data for analysis. However, quantitative interpretations of findings, are frequently assumed to be manoeuvred and unrepresentative of social behaviour and thus of dubious validity. Yet they were used to reduce the subjectivity and imprecision which qualitative research is reproached for [The Open University, 1996; Swann, 1994].

Therefore, despite the unstructured observation, the participants’ engendered **instances of reasoning** were “systematically” identified [The Open University, 1996, p.187] because expected as a result of research mentioned in the Literature Review, my MA thesis [Gélât, 1995] and two pilot studies. There are no definite delimitations between ‘systematic’ and naturalistic observation since these often overlap [The Open University, 1996; Swann, 1994] however difficult it is to reconcile them [Edwards & Westgate, 1994, 2<sup>nd</sup> edn]. Systematic observation is effective in dealing with an extensive amount of data such as transcribed talk [Croll, 1986].

For the purpose of demonstrating the children's intricate **logical reasoning**, the anticipated **deductive utterances** were divided into two categories,

- (i) INFERENTIAL: "deriving an opinion or conclusion or giving reasons for one's standpoint by using evidence, making comparisons and/or reasoning"
- (ii) HYPOTHETICAL "achieving a conclusion derived from an assumption, guess or conjecture" [Gélat, 1995, p.25]

They were **categorised** and **quantified** in order to demonstrate the features and frequency of logical reasoning encompassed in the two studied interactional processes: peer and classroom discourse. This provided the means of making comparisons and "interrelationships between variables" and discern diverse forms of cognitive comportment in the case of the present investigation [Croll, 1986, p.29]. Categorising talk and problem-solving moves can also help in statistical procedure, to interpret the situation and to make correlations [Teasley, 1995; McIntyre & Macloed, 1993, 2<sup>nd</sup> edn][Refer to Table 4.1].

### ***Models of reasoning instances and deductive reasoning***

The **reasoning markers** and **deductive utterances** were based on amended versions and a combination of several models.

- a) *Donaldson and Elliot's [1990, p.42] "deductive explanations" identified by expressions such as "we can tell that, know that, think, must, might, perhaps". To these, I have joined "probable" or "probably", "maybe", "it seems that", "it appears that" and "I suppose". Children commonly employ elliptical variants of these statements, leaving out deductive markers and replacing other connectives by "because" [Donaldson and Elliot, 1990]. When employed in speech, their meaning is equivocal, but can be deduced by the utterance context.*
- b) *Bryant and Kopytynska [1976, in Donaldson, 1987, 2<sup>nd</sup> edn] and others' researched children's aptitude to deduce by way of contrasting on the basis of known dimensions and proportion - "equal to", "greater than" [Donaldson, 1987, 2<sup>nd</sup> edn, pp.57-58]. The children made inferences as in "If A equals B and if B is longer than C, then A must be longer than C" [ op. cit.]. Therefore*

analogies, quality and quantity comparisons “more than, less than, as much as, as little as” have been considered. I have also added “different” and “different from” if the difference was explained and examples were given. “Instead of” was included if it denoted a contrast or comparison.

c) *The type of reasoning which the children investigated by Barbara Wallington [1974, in Donaldson, 1987, 2<sup>nd</sup> edn, pp.56-57] used in reply to her statement serving as a premise from which an inference was derived.* While presenting boxes with or without stars to her participants, her tip was “if there is a star” on the box “then there is no wee animal” in it. The children thus employed assertions with “it must be” or “it has to be” as answers, or “When there’s no star, there’s supposed to be a wee animal in the box.” One must remark that “when” substitutes the speculative “if”.

d) *The illustrations employed by the Kendlers [1967, in Donaldson, 1987, 2<sup>nd</sup> edn, pp.55-56] to demonstrate children’s reasoning by inferring or concluding from a given claim.* Examples emphasise children’s elliptical utterances, as in “She must have eaten all her food on the other day”, signifying “Houses normally have food in them; this house has no food. *Conclusion:* The food must have been all eaten up.” I have also added “it would have to be” when it was deductive in meaning.

e) *Phillips’s [1985, pp.68-69] hypothetical talk detected by the following word signs: “if”, “suppose”, “what if”, “could”, “might”, “what about”.*

f) *Argumentation expounded by Phillips [1985, pp.70-71], employing utterances with “because”, “if...then” or “on the other hand” when discourse is elaborated.* Also included is the cohesive device “like” denoting “for instance” thus stating examples to support opinions [Phillips, 1988, p.77]. Other markers such as “such as” and “for example” were added.

g) *Utterances revealing “causal or consequential relationships” as exemplified by Fairclough [1989, p.131] with the use of logical connectors such as “even though”, “although”, “nevertheless”, “as a result”.* To those, I have taken on “despite” which means “even though”.

h) *Halliday and Hasan’s [1976, p.243] understanding of utterances with “causal connectives” to highlight cause and effect relationships, and derived*

conclusions with “so, then, therefore, consequently, as a result, for this reason”. “This is the reason why” was also taken into account. It must be noted, however, that “the reasons are” replaces “because”. To those, I have added, “in order to” and Jim Martin’s “to” denoting a “causal relation” [Martin, 1989, 2<sup>nd</sup> edn, p. 11]. It was also necessary to consider “cause” and “caused by”.

i) Halliday and Hasan’s [1976, p.242] “adversative” linking words to indicate contrasts and comparisons. They are consistent with Wilkinson’s [1986b] reflecting on both positive and negative sides of the topic, advantages and drawbacks, argument and counter-argument, therefore showing opposition or comparing with the use of “but, yet, though, however, nevertheless, on the other hand, in contrast”. To recognise inferential utterances, some of Halliday and Hasan’s [1976, p.243] “temporal” connecting words, such as “in conclusion” were considered. I have also included “Finally”, “overall”, “on the whole” because they would be employed when generalising or deducing from what has already been said.

j) In identifying the children’s deductive utterances, the children’s elliptical statements [Perera, 1984; Donaldson 1986] were taken into account. So were “juxtaposition” of utterances when connectors are absent [Fairclough, 1989, p. 131] and “submerged reasoning” [Martin, 1989, 2<sup>nd</sup> edn]. “Duetting” [Maybin, 1994, p.137, citing Jane Falk] and co-operatively constructed utterances [Torrance, 1994] were considered when a deductive statement was to be recognised.

To be precise and minimise bias in comparing the experimentals with the controls, all the produced **deductive markers** and **deductive utterances** were quantified *per* an equal duration of 10 minutes of talk [Chapter 4; Table 4.1]. Restricted by the space of this dissertation, I tried to be as objective as possible when having to cite talk “selectively” for illustration [Swann, 1994, p.47]. Some theorists express their reservations regarding employing systematic observation because it does not represent or reflect the authentic occurrences as happening in a time sequence. The circumstances are usually presented as only random enumerations whose values within their initial interactional context are

lost. Hence, these representations are considered untrustworthy and unverifiable [Crook, 1994; Draper & Anderson, 1991; Delamont & Hamilton, 1993, 2<sup>nd</sup> edn].

Wegerif and Mercer [1997, p.275; Mercer & Wegerif, 1999, p.96] propose that computer-based discourse transcript analysis be used to investigate co-operative learning. “Concordancers” can help the investigator move repeatedly through a transcript of any form, searching for markers ‘because’, ‘cos’, ‘so’ and ‘if’ as well as questions. The instrument is quick and can present the markers both as a list and within context. This software can facilitate contrasting and finding relationships among variables, and can also provide statistical calculations. I presume that the software might permit the identification of many, but not all, markers elucidated within the list of models which I have devised, if programmed to do so. I also doubt that the device is appropriate to detect inferred reasoning or reasoning performed by other means or when markers are absent due to speech ellipses. The categorisations would have to be complemented by human close analysis of transcripts.

In the transcripts used as examples for the current dissertation, as in the full collected data transcriptions not presented here because of space restrictions, all reasoning markers were underlined and can be verified within context. Thus the instances of reasoning are not segmented, but presented within the discourse circumstance so that the social conditions of the utterances are not “abstracted”, taken for granted or overlooked [Stubbs, 1993, 2<sup>nd</sup> edn, p.73; Crook, 1994; Crook 1999; Wegerif and Mercer, 1997; Mercer and Wegerif, 1999; Edwards & Mercer, 1987]. In the present dissertation, the observed verbal deductive statements and other interactional patterns related to learning and assistance are displayed within the context in which they were uttered and not in coded conditions. They are also amply exemplified. The “overall” “organisation” of the teacher-conducted lessons are also depicted, to better clarify teaching tactics [Stubbs, 1993, 2<sup>nd</sup> edn. p.74].

After the oral preparation, both experimentals and controls performed the same written task in order to determine which of the two types of oral preparation had better facilitated compliance with argumentative structure.

### *Conditions in which the children wrote*

The selected children, control and target, wrote their essays in their own or English classrooms, supervised by both their teacher and myself, excepting the School-4 teacher who had to leave during part of the lesson. As mentioned earlier, the other pupils in the class [those who were neither targets nor controls] also performed the written composition. Except for the School-2 children, all the teacher-taught lessons took place after the peer-group talks were completed, just before the written task. The controls were therefore advantaged in the sense that they were already sitting at their desks, pens in hand, some with the topic question, thus ready when the experimentals were being called in to the classroom. Most of these experimentals' seats were then allocated by their teacher.

Printed topic questions on slips of paper were given to each pupil. To the School-1 children only, the topic question was presented in its entirety, in the same manner as it was given to the experimentals during their peer-interactions. From then on, it was decided that the children write without the prompts and hints of the **extended topic question** [Appendix 2.2]. Thus, the controls and experimentals in the rest of the schools were presented with the shorter version during the composition-writing:

#### **School 1**

Which of the two, the **Tudor times** or the **present**, [do you think] would best suit you to live in? Give reasons for your preference, and why you disagree with the other ways of living, by using examples of



*customs, attitudes, living conditions, ways of thinking etc . . .* from both periods. Base your discussion on your knowledge of the two historical times, the **Tudor times** and the **present**, their advantages and drawbacks.

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### **School 2**

Would the **1940s** be a better time for you to live in than the **1990s**?

### **School 3**

Which of the two, **Victorian** or **20th century** industrialism produced less damaging human and environmental disasters, do you think, and which period would therefore be a better time for you to live in?

### **School 4**

Which of the two, the **Norman times** or the **present**, [do you think] would be a better place for you to live in?

The question was read aloud by either myself or the teacher before the writing began. The children were told that they had 35 minutes, but when the time had elapsed, those who were still writing were permitted to continue until they had finished. They were given five to seven minutes longer to complete their compositions. Neither the teacher nor myself wanted any children to have the impression that they were in examination conditions. Talk was therefore not entirely prohibited, but kept down to a minimum. We told the children to work independently. They were free to ask for spellings and consult a Thesaurus or dictionary. They were also requested to read through and check their written texts before handing in their work. While re-reading, the pupils' major corrections were adding in missed words or making punctuation or spelling rectifications. However, no major revision or re-editing was carried out to rule out any factor that might have affected the written task apart from the interactions in preparation for the writing.

To find out which of the controls or experimental children had more successfully conformed to the argumentative genre, the scripts were assessed. They were close-read, evaluated and qualitatively analysed according to Wilkinson's [1986b] criteria elucidated on page 3. However, qualitative analysis is dependent on personal interpretation, as mentioned earlier in this chapter. Thus, to minimise bias, the texts were also assessed by two certificated IELTS examiners, using the same criteria. In so doing, it was intended that they would corroborate my findings as to which compositions better adhered to the model, they would provide numerical representations to facilitate the statistical testing and were believed to ensure the findings' accuracy [The Open University, 1996]. The quantitative ratings would also display more clearly the differences between the performance of the experimentals and controls. Wilkinson's criteria, as presented earlier [page 3], were provided to the accredited examiners, as well as detailed possibilities of writing characteristics to serve as guidelines for their marking [Appendix 2.5]. A rating scale of 3 'genre-specific' categories was derived [Fulcher, 1997].

1. **Task fulfilment** [40 points]

2. **Logical sequence and coherence** [20 points]

3. **Information processing** [40 points]

The assessors marked independently then collaboratively. Thus they moderated to achieve an agreed grade because the criteria were different from IELTS and therefore new to them. Some of the scripts were also discussed with me. For example, it was problematic to evaluate the compositions which contained two simultaneous viewpoints as a premise, such as Daniel's composition as will be shown later [School-4]. There were also other criteria as well as argument and non-argument features to be clarified. The ratings in percentages and the analytical scoring, based on the 3 categories, were carried out at my demand. A passing score of 50 was requested as well as a varied range across the 0 to 100 spectrum. However, the markers awarded the global score first, ending in five or nought – 50, 55, 60, 65 etc... [Appendix 6.1]. They later split these scores to

produce the 3 analytical or category ratings. Some of the children's analytical scores, when added up, did not correctly total the initial global score [**Appendix 6.1**]. I have therefore only emphasised the global scores in the quantitative rating presentation [**Chapter 6; Table 6.1**]. There were some discrepancies between the evaluation ratings and my own close script analysis. This disparity was more discernible within the 3 criteria categories than the global scores. Analysing qualitatively according to the 3 quantitative category ratings would have lacked consistency [**Appendix 6.1**]. The assessors received the scripts of School-1, School-2 and School-3 together first. The School-4 texts were sent several months later.

Only attributes pertaining to the genre were taken into account for the scripts' evaluation. Syntactical characteristics, paragraphing and mechanical features such as spelling, punctuation and handwriting were not considered in order to determine more efficiently whether the pupils had adhered to the generic properties of written argument. The assessors were not told which set, control or experimental, the children were in.

Because the dissertation concerns cognition, the reasoning instances in the written text, at micro-level within the clauses, were identified according to the reasoning models and markers elucidated earlier [examples: **Appendix 6.3**]. They were quantified in order to contrast the controls' with the experimentals' extent of reasoning within the writing. The quantifications were converted into percentages to facilitate the statistical process [**Chapter 6; Tables 6.2 to 6.5**].

The t-test for independent samples was employed to find out whether there was a significant difference between the experimentals and controls on the mean percent of each of composition and micro-level reasoning.

As previously mentioned, the written texts were qualitatively interpreted in the light of those 3 pre-set categories or criteria in order to compare the experimental writing characteristics with those of the controls. In a way,

qualitative descriptions also served to verify quantitative data effectiveness [Bird, 1992] and make sense of it [Eisner, 1992].

Whereas the examiners and the professional statistician were paid a service fee, each of the teachers who conducted the control lessons was offered a present for her/his effort [Cameron et al., 1994].

### **3. Triangulation and respondent verification**

Interviews provided more data from the controls and target children, when they had finished their compositions. The information was necessary to confirm that the interactions had influenced the writing, to minimise bias, check overstatements and misconstructions [The Open University, 1996; Bell, 1993, 2<sup>nd</sup> edn]. The validation debriefings, therefore, were to examine the interactional process and researched activities through the children's perceptions. The children's replies were expected to reveal the problem-solving difficulties which the pupils might have had [Snyder, 1995; Webb, 1989]. Moreover, since verbal interaction cannot be 'measured' to determine for certain that it influences learning, interviews were anticipated to find the answer [Draper & Anderson, 1991; Snyder, 1995]. Hence, employing various research approaches "increases the chances of accuracy" and can verify the findings' soundness and objectivity [The Open University, 1996, p.97; Leedy, 1996; Hammersley, 1994; Snyder, 1995].

I tried to conduct the interviews in as natural a setting as possible [Nias, 1995], in an easygoing, self-assuring atmosphere within informal locations, such as in the landing, the corridor outside the classroom, the library or the unused gymnasium.

To decrease ethical problems concerning interviewing, as mentioned earlier, I had personally notified the children participants that they were contributing to

my research in assisting me to find out more about children's writing. They had already been informed that they would tell me what they thought and felt about their writing. They, therefore, knew that the recorded interview was not a "test". They also understood that I was going to divulge information about their performance. Also, by this stage [after the composition writing], the children had further acclimatised themselves to my presence, had better comprehended the purpose of my research and, the experimentals especially, were enthusiastic about communicating their views on their argument writing. What they said, therefore, was anticipated to be truthful and intelligible. They were actually keen on speaking in the presence of the recorder. At their request, some listened to what they had said when the debriefing was completed. My introductory letter to the headteacher had also mentioned that the children were going to be questioned. I was not told whether the headteacher had informed the parents of my motives [The Open University, 1991, p.47; BERA, 1992; Draper & Anderson, 1991; Verma & Mallick, 1999].

Following Foddy's [1993] guidance, questions had to be phrased in a manner that would secure the children's trust and would least affect the responses. Informal, uncomplicated and succinct questions were devised, despite the suggestion that long questions help recollect, because of longer reflection periods. Question formulations can have the disadvantage of influencing the respondents' replies. Jones [1985], however, is convinced that concern about being impartial is not well founded. "...a genuinely non-directive interviewing approach simply is not appropriate for research" [Whyte, 1982, p.111].

Variants of the same open-ended question were utilised for the experimental children. They differed according to the specific contexts in which they were asked. They were open-ended because appropriate for children, do not direct replies and allow respondents to say whatever and as much as desired [Foddy, 1993; The Open University, 1991]. However, replies to open questions are difficult to categorise and classify when analysed [Foddy, 1993]. Gareth Davies'

question appeared to require specific responses and was not likely to influence the answers [Davies, 1989, p.95]:

**“Why is it different...?”.**

But, “How is it ‘different’ to plan writing together?” was thought to be a more open question.

- I’d like to ask you how it is different to plan writing together?
- How is it different to plan writing together, in small groups, as you’ve done today?
- What I want to know is how it is different to plan writing together, in small groups.
- Tell me how it is different to plan writing in small groups, or with your friends.

Interviewing the controls was believed to supply more insight into how they differed from the experimentals in handling the task, whether they encountered difficulties or facilitations and their expectations of how written arguments should be taught. Variants of the following questions were asked to both controls and experimentals:

- How easy and how difficult was it to write your composition?
- In what way was your composition easy to write, and in what way was it difficult?

And variations of the following questions were asked to the controls and when the occasion had arisen, to some experimentals as well:

- Is there any other way you expect [want, wish] this kind of composition to be taught?
- How do you think this type of composition could be made easier for you?

Hence the question formulation and reply pace were adjusted to the particular situation and person in order to reduce the child’s concern and mistrust and reach her/his understanding [Jones, 1985, p.51-52]. However in most cases, the interviewing period was relatively short, even though the allocated time was exceeded, and the desired result concerning the latter question could not always

be achieved. None of the teachers or headteachers complained. They did not appear to mind that the interviews were lengthened beyond the agreed time.

Cues to encourage more detailed replies and closed questions were employed because they were easier to cope with [The Open University, 1991]. Closed questions explored deficient responses [Foddy, 1993]. Nonetheless, closed questions are inconvenienced by limiting the reply range and furnishing insufficient possible answers which could misinterpret the interviewee's responses. In this study, the closed questions, served the purpose of confirming, completing and clarifying any dubious responses [op. cit.].

“How [what] do you mean [by] that?”

“Tell me more about that.”

“Anything else?” [Foddy, 1993, p.135]

In order to explore the pupils' opinions thoroughly [Hedges, 1985] and guarantee straightforward replies [The Open University, 1991], all experimentals and controls were individually interviewed except for the pupils in School-4 who were in groups of three because of time constraints. Group-interview disadvantages are that responses might be affected by other participants, however this micro-situation reflects the wider social influences. Because the questions were neither upsetting nor delicate, the respondents were not reluctant to express their true attitudes [Hedges, 1985].

In group interviews, however, the respondents usually consider one another's opinions and replies are more varied than in in-depth interviews. This frequently induces the participants to examine the different viewpoints which contribute to inventiveness, expressing comprehension and new outlooks. The participants render the debriefing more lively which was the case with my group interviews [Hedges, 1985].

For more precise field notes, the debriefings were also audio-recorded. No note-taking was effected, however, because it would have hampered the interview's course and quality [Whyte, 1983].

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The current study, therefore, combines various methodological approaches, both qualitative and numerical, each serving to examine the different facets of the phenomena which occurred within the stages of this research.



*Analyses of Teacher-led Lessons*

All four teachers used the board to supply visual support. They added the important points in orderly outline form as the lesson proceeded. Although Teacher-4 allowed more space, all teachers chose to negotiate the genre by generally closed **questioning** while teaching as well as by **explanative monologues**. However, each of the four teachers used a distinctive strategy to instruct the generic structure.

### **DISTINCTIVE APPROACHES TO INSTRUCTION OF GENERIC FORM**

#### **Teacher-1:**

Teacher-1 through closed questions, reminded pupils of the various styles of continuous writing, “one paragraph after another”, which the children had covered: story writing, newspaper report, poem, letter writing, book reviews, film or play reviews, science projects or investigations, recounts. She thus installed a shared mental context where previously learned information could be linked to new learning [Edwards & Mercer, 1987]. She likened argument to “grown up” writing, which required “strong” language, adding that supporting viewpoints required reasons. She introduced the topic question, then began treating the genre with the children. [**Appendix 3.1: Transcription Convention**].

#### **Transcript-1**

Teacher-1: [*repeating what Jim said*] because and all the reasons why  
// right / so we’re getting a little bit further into our writing / we’re  
starting off by saying / I would choose this time // then / I’m starting to  
think about why I would choose this time / do you think it would be

enough / do you think it would be enough / to write the whole time  
about the one you've chosen ?

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.....  
is there anything else you would need to include in your writing / apart  
from saying why you're best suited to the present / anything else you  
need to include? / Hilary / what do you think?

Hilary: how you're suited and not suited

Teacher-1: good girl / you've also / got to give reasons / why **not**  
*Tudor times* / why you **wouldn't** want to live in the *Tudor times* / and  
Robert and Laurie / if they've chosen *Tudor times* / they've got to say  
**why** they would be best suited / and what **isn't** good or doesn't suit  
them in modern times [200] //

.....  
Thus Teacher-1 instructed the children to state their opinions, give reasons why  
and also why they would not have the **opposite** or **alternative** standpoint.  
Twelve children, about half the children present, one at a time, were given the  
opportunity to reply verbally to the topic question and inevitably use the word  
'because' when giving reasons why. They were involved in supporting a  
viewpoint and therefore produced deductive utterances, mainly inferential ones  
[Transcript-2, the reasoning markers are underlined].

#### **Transcript-2**

[reasoning with 'because']

Teacher-1: OK? // right / someone else who's chosen / Jennifer / what  
would you choose?

Jessie: present

Teacher-1: and why would you choose the present Jessie?

Jessie: [*inferential utterance, with 'because'*] erm because Tudor  
times you can get more angry lots of times / erm more [*comparative*]  
times [*inaudible*] and marry loads of people just to get [*in order to*  
*get*] a son [220] [*in other words: 'I would choose the present because*  
*in Tudor times...*']

To the children who did not use 'because' in their replies, the teacher reminded them to do so [Transcript-3]:

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### **Transcript-3**

**[reminding the use of 'because']**

Teacher-1: now / remember the sort of writing we're doing / we want to it's not enough.....just to make a statement / **I think** / you've got to try and support it / you've got to expand it / and explain it / OK?

She then told the children that they might have, not just one, but many reasons to give and she gave examples from what the children had mentioned

[Transcript-4]:

### **Transcript-4**

**[giving several reasons]**

Teacher-1: so food / being able to go to down the shops / do you start to see that there is a lot you can include / you can talk about clothing / you can write about the clothes / you can write about the life style / you can write about / there's one thing that none of you had mentioned yet / I'm quite surprised / it's the sort of things you do when you're not in school [265]

*[many raise hands and call ] //*

She finally modelled the genre by instructing the composition **organisation**: she advocated "**comparing**" and "**contrasting**" as illustrated in **Transcript-5**:

### **Transcript-5**

**[comparing/contrasting]**

Teacher-1: ..... you can't just write a list // you've got to write about things in some sort of organised way / so for example if you want to talk about houses for a while / houses now and houses then / we're comparing contrasting / what suits me now which I wouldn't have then or what was good then which I wouldn't have now / so all the time / you are comparing and contrasting .....

To the question whether "writing under headings" would be required, Teacher-1 recommended the use of paragraphs because they were not writing "notes".

Teacher-1, thus requested the pupils to reply to the topic question and use 'because' to support their viewpoint. She made them aware that many reasons were required and explanations for the opposite opinion were also needed. She also informed the children that the genre involved comparing and contrasting, not listing items. She requested paragraphs, not writing under headings. Hence some of the argumentative writing criteria were instructed [Wilkinson, 1986b].

#### **Teacher-2:**

Teacher-2 also ensured that the treated subject was shared by reminding the children that it was covered before Christmas [Edwards & Mercer, 1987]. She stated the topic question and modelled the response by requesting the children to "think" of the 1940s as would children then, and to contrast life then with life nowadays. She explained that replying needed a two-sided explanation, pros and cons of the two periods. [Transcript-6]

#### **Transcript-6**

[*contrasting*]

Teacher-2[014]:

.....

so you've got to think back a little bit / right / we did the war / so think about what it was like in the 1940s / right / for a child / like you / what was it like in the 1940s / just compared to what life was like / today // now if you ask the question // would the 1940s be a better time for you to live in than today that's the question that you're being asked // now / if you're thinking about that / the first answer might be something like today / but you can't just write that when you're doing that kind of piece of writing / both times 1940s and the 1990s have got good and bad things [ . . ] haven't they?

The recalling of content material through Teacher-2's questioning required short responses [Transcript-18 further on]. However, monologues were clear and

lengthy, detailed and thorough. She explained how she wished the composition to be organised. The lesson appeared to be an exhaustive revision of what was already learned about the 1940s and the familiar features of the 90s. On the board, the teacher added items as they were mentioned. There were ‘bad’ and ‘good’ item columns under both the 1940s and 1990s headings. This was another manner to impart both sides of the argument which the children were going to write about. Half way through the lesson she reminded the children of the lists on the board [**Transcript-7**]:

**Transcript-7**

**[pros and cons]**

Teacher-2: .....it’s easier to think about maybe some of the bad things / that you might’ve not thought about cos at the beginning Duncan you said nothing was bad about the 90s / but you think about some things that we thought about the 40s / you can see that maybe there **are** some things that aren’t so good about the 90s / cos you can look at what they had in the 40s in the ‘good’ column [*on the board*] // and sort of compare that now / you see the 1990s have got some things aren’t so good / for you as children.....

Later in the lesson, she “recapped” to outline the subject matter sequence [Edwards & Mercer, 1987, p.82]. She thus summarised, reminding the two sides of the argument before giving subsequent instructions for writing.

**Transcript-8**

**[recapping]**

Teacher-2: .....apart from a lot of you would have probably said / yeah the 1990s are better than the 1940s / but now you can see that there are two sides // right / so we haven’t looked at the good things / what are the good things about being a child in the 1990s?.....

Teacher-2 lastly covered “good things” specifically for girls in the 90s, and did the same for boys. Allowing the children to identify with those conditions was presumably a memory aid for them [**Transcript-9**].

### Transcript-9

Teacher-2: well about the future for **you** / as a girl / what does the fu /  
when you grow up what do you think kind of future would be better  
for you than it would have been for girls in the 1940s?

Julia: we can get good jobs

Teacher-2: that's it / there's better opportunities for women isn't there?  
/ yeh / women go out and earn as much money as men //

.....

Teacher-2 finally asked the children to think of both positive and negative aspects of both periods, to support standpoints –“back it up”– and to remember what she had written on the board [Transcript-10].

### Transcript-10

**[pros and cons]**

Teacher 2: think about the good and bad things about both / if you're  
going to write an essay about it / and you're going to say why / you've  
got to be able to back it up yeah / say why you think the 1990s is better  
than the 40s / so what was wrong in the 40s / also there were good  
things about the 1940s / weren't there / don't forget those / look at  
both / put both sides of the argument / right /

.....

try and remember them all / I put it up the board / just think and  
remember / OK ?

[437]

On the whole, Teacher-2 advocated **taking account of both the negative and positive sides** of the two periods, including the non-preferred one. She also advised the children to **substantiate their viewpoints**. The content which she imparted and extracted from the children through questions was thorough, covering pros and cons of the two periods. She instructed her pupils in what

precisely she expected in terms of content and form, which amounted to some of Wilkinson's criteria [1986b].

### **Teacher-3**

Contrary to the first two teachers, Teacher-3 handed out the topic title at the beginning of the lesson. He abided by his common practice: the pupils spent 15 minutes of individual planning before writing. Most encountered Year-6 teachers use the same approach in order that children might get accustomed to the SAT 11+ exam conditions. The School-3 children usually received minimal instruction in composition writing. However, considering the circumstances, Teacher-3 used part of the lesson for direct instruction and the remainder for the children's personal planning on paper. He informed the children that they were going to write a "story" and later added,

#### **Transcript-11**

Teacher-3: .....it's not a story / it's a piece of writing / alright?

He read the topic title and through his questioning, tried to **clarify terms and content about 'industrialism', 'environment' and 'disasters'** referring to Charles Dickens, history lessons and notes he was writing on the board. In **Transcript-12**, Teacher-3 defines 'environment' and 'disasters'.

#### **Transcript-12**

*[defining 'environment' and 'disasters']*

Teacher-3: what's the environments? [133] / here it says environmental but what do we mean by the environments? // what is our environments? / a place we can go to for our summer holidays?

Unknown: is that where we live? that surround us?

Teacher-3: surround us / and disasters? what do we mean by disaster? // environmental **disasters** *[writes on board]* Sharon?

Sharon: something crushed or blown up or something

Teacher-3: something crushed or blown up // disaster *[writes on the board]* / a disaster // what do you think a disaster is // Betty?

Betty: oil leakage and things

Teacher-3: oil leakage / that'll be a disaster // why would that be a disaster?

Betty: because erm / it'll pollute the sea / and the animals in the sea / it would kill off erm / birds / fish / things [ . . ]

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Treating the genre was the teacher's next task. He requested the children to think of the topic question, to have two headings in the planning notes – **advantages and disadvantages** – and to **contrast Victorian industry and disasters to those of today**, while referring to the notes on the board. Charles, however, appeared to be confused about the 'story' section of the essay and did not understand what was required. Teacher-3 clarified that there was no story. He likened the genre to **debates** on television "**they think one side and then consider something else**". Some discourse attributes were thus modelled: **comparing and considering both sides, like a debate** [Wilkinson, 1986b]. Examples of controls' written plans can be found in **Appendix 3.3**.

#### **Teacher-4**

By closed questioning, Teacher-4 spent nearly half the lesson in encouraging recalling Norman historical facts [**Transcript-13**].

##### **Transcript-13**

Teacher-4: [003] you don't need the facts as such / it's not a History lesson / it's thinking about the times // and / the times that people lived in // can you try and remember first of all // **anything** you learnt from that time?

Jeremy: mm / battle of Hastings

Teacher-4: battle of Hastings / so you know something about the battles

.....

She implicitly alluded to the topic when discussing the differences in warfare between Norman times and today [**Extract-14**].

##### **Transcript-14**

Teacher-4: =you= don't have / face to face like they did here / right now you've got the ideas of Normans in your mind a little bit / I want you to think of other areas of life at the time / because you'll be trying



to decide later / which you will prefer to live in / now we've only talked about battles and you might decide that **that** is not attractive at any time [080]

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The topic question was not clearly introduced until past the middle of the lesson, when she began to make the children aware of the differences between Norman life features and some in present times.

### **Transcript-15**

**[comparing: church, political system]**

Teacher-4: ..... // // the other big area was the church / [160] which is different from now / which had a lot of the influence at the time / how did it have influence Edmond?

Edmond: there were monks

//

Teacher-4: yeah [*writes on board*] // and you had the monks within the monasteries [*writes*]

.....

Teacher-4: it was a sort of political system / which is something else which was different from today / isn't it // not the King at the head of the country /

Unknown: prime minister

**Transcript-16** shows how she instructed the genre requirements by requesting the children to “think” of which era they preferred and **to consider both the “advantages and disadvantages” of each period**. She advocated taking account of the **aspects they preferred as well as the adverse side**. She proposed an **approach to the introduction or probably the statement of the viewpoint**. It would be short and would include what the children are ‘thinking about’. She advised that as they wrote about a feature of the Norman times, they should think of its equivalent in the present. She therefore requested them to **compare**.

## Transcript-16

### [*criteria instruction*]

Teacher-4: ..... can you think // which time you would prefer to live in / now there are advantages and disadvantages all the way along / you've got / **that** [*points at 'battle' on board*] which is not a very nice factor / but you've got // castle [*points at 'castle' on board*] might be nice to live in

.....  
start with the thing that's most important to you / so first of all you'd have an introduction / which would be what [*writing what she is articulating*] you / are / writing about or what you're thinking about / and that won't be very long / but that would just be saying / what you were going to be writing about / then choose / some areas from here [*pointing at board*] / which are important to you / and explain // about / supposing you are writing about the houses / and social structure / where people lived in other words / explain the Norman // part of it [*writes*] / and then explain / the modern // way we live /

The topic question was handed out after the “informative” monologue [Sinclair & Coulthard, 1975, p.26]. Writing was referred to as “essay” such as would usually be written in ‘English’, ‘History’ or ‘Religious Studies’. The topic question was explained, re-emphasising the introduction. Stating one’s standpoint was reiterated. In the rest of the lesson, through **questioning** as well as **welcoming the children’s views**, Teacher-4 highlighted both negative and positive points of each of Norman times and today.

Relevant points were written on the board. There was much rephrasing what the children had said in an improved manner. In **Transcript-17**, the teacher also “recapped” covered content, a pervasive teacher dominating feature of control to design the lesson sequence [Edwards & Mercer, 1987, p.82].

### **Transcript-17**

*[rephrasing, recapping]*

Penny: the present

Teacher-1: you would choose the present Penny and why would you choose the present?

Penny: because today we've football and we've got more

*[comparative]* clothes

Teacher-1: *[reformulates and also elaborates what the pupil said]*

you mean in terms of clothes / right that / just a moment / erm erm /

*[recapping]* Cara / mentioned the way people treated each other / and she talked about the killing that went on / the reason she didn't like

Tudor times was the warfare and the killing *[writes on board]* /

.....

erm Penny is thinking about clothing [233] *[children laugh]* *[T writes on board]* a real difference // erm Laurie..... wants to be a rich person / perhaps because of the clothing / perhaps he likes the elaborate styles of Tudor times *[one child laughs]* / is there anything different / *[recapping]* clothing / warfare is there anything else that you might choose to discuss? . . . . .

Some questioning exchanges also functioned to “discourage” uninvited responses, a strategy to regulate the allowable information such as in **Extract-18** [Edwards & Mercer, 1994; Edwards & Westgate, 1994, 2<sup>nd</sup> edn, p.48].

[*monopolising discourse, disregarding pupil responses*]

Teacher-2: right / [*recaps*] so the food although it's rationed / it was more healthy // because / we can now think about the 90s what do we tend to make a lot more of / **now** / that they wouldn't have done / Sally?

Sally: sweets

Teacher-2: you eat sweets / but what about the food that you eat?

[*hints*] / food like [*expects specific reply*] / Jack

Jack: MacDonald

Teacher-2: right / what do we call that / things like MacDonalds and take aways =what's=

Duncan: =gorgeous stuff =

Teacher-2: [*expecting specific reply*] no / Duncan [*someone laughs*] //

Lucy

Lucy: [*inaudible*]

Teacher-2: it's got a way of describing it / Sally

Sally: it's got loads of salt and sugar in it

Teacher-2: right / so it's not food that's good for you / it's? / Ken?

[237]

Ken: fatty food

Teacher-2: it's fatty food / j

Lucy: junk

Teacher-2: **junk** food / Lucy / that's right

**junk food** / and it's not [ *writes on board*] // very [*hints*] / what's bad about junk food? // Jack [241]

Jack: it's fattening

Teacher-2: right / so it's not very / [*calls out unintelligible name*]

Unknown: healthy

Teacher-2: so it's not very healthy [*writes*]

Unknown: it is

Teacher-2: [*ignores*] right /

.....  
you see the 1990s have got some things aren't so good / for you as  
children // more cars which means what?

Amber: pollution

Teacher-2: more pollution

[*simultaneous talk*]

Teacher-2: sh-sh / Amber [*writes on the board*] // more cars / which  
means what for **you** as children // Sally?

Sally: pollution

Teacher-2: yeah / we've said that / what else / Phil?

Phil: say like [ *say= suppose; like=for example*] you wanted to play in  
the middle of a game in the road and you have to keep on going up =..=

Teacher-2: =yeah= [*interrupts the child*] / it's harder to play on the  
road / isn't it / or out in the street [*writes on board*] / cars / there's a lot  
more traffic / it's a lot more dangerous isn't it? [*writes on board*] //  
right / so traffic brings / pollution / and it means that it's busy and it's  
dangerous

The above transcript confirms descriptions of teachers' closed evaluative questions requiring definite replies that they already know [Edwards & Mercer, 1987, p. 142; 1994; Donaldson & Elliot, 1990; Wood, 1988; Edwards and Westgate, 1994, 2<sup>nd</sup> edn]. But the teacher also prompted information which was requested from Lucy and Ken. These hints serve the instructional device of conveying the demanded information to make it look as though the pupils themselves had furnished the replies. This is compliant with Vygotsky's teacher facilitating theory of providing cues and suggestions to carry out what the pupil might be inadequate to accomplish on her/his own. The strategy however, could give children erroneous notions of their abilities [Edwards & Mercer, 1994].

The above extract, like **Transcript-19**, unveils examples of disregarding what the children say, of repressive learning conditions with confined pupil contribution, and "terminating the exchange when enough information has been obtained for the practical purpose of that encounter" [Edwards & Westgate,

1994, 2<sup>nd</sup> edn, p.48]. Like other classroom research, this study also reveals the teacher's domineering discourse by "eliciting" "IRF" structured "moves" or "exchanges" [Sinclair & Coulthard, 1975, pp.28, 21; Edwards & Mercer, 1987].

### Transcript-19

*[IRF structured constrained talk, guessing]*

Teacher-1: ..... what do we call that type of writing? / we've done quite a few of those earlier on in the year / Cara?

Cara: **[guessing]** an account

Teacher-1: an account or a / **recount** / remember we talked about doing **recounts** of something // now a type of writing we haven't done a lot of yet / and it's something we're going to be looking at this term / because it needs some more grown up kind of writing / is when you're having to give what **you** think about something / can you give me a word for / what you think about something / give your **own** what ? / your **own** Hilary?

Hilary: erm / I can't think = the word =

Teacher-1: =you can't think= of the word then don't put your hand up about it / Hilary / Jim?

Jim: **[guessing]** opinion

Teacher-1: your **own** opinions / you're going to have to give your own opinion / or your own points of view

The class lesson observations corroborate contentions that teachers monopolise the turn-taking mechanism, in our case with evaluative questions or lengthy explanatory monologues [Transcripts-4, 5, 6, 7, 10, 16]. The constrained atmosphere can be interpreted in terms of power relations affecting discourse [Wood, 1991; Fairclough, 1989; Edwards and Westgate, 1994, 2<sup>nd</sup> edn; Donaldson & Elliot, 1990]. However, Teacher-4's lesson was less repressive towards the end.

The common brief or single-worded pupil replies are to be noted [Wood, 1988]. This shows how classroom discourse fails to comply with principles of ordinary

every-day speech. As anticipated, excepting Teacher-4's last part of the lesson, the teacher-led lessons prevented pupil sustained talk, and as a result, hindered explanative utterances and reasoning. This was because the children were producing "sentence fragments, often being minimal responses to questions for display" [Wells & Wells, 1984, p.193]. Certain teachers consider "there is insufficient time, if the content of the curriculum is to be covered; what the pupils have to say is often irrelevant, if not inaccurate; and most dangerous of all, pupil talk is a threat to the teacher's control" [Wells & Chang, 1986, p.129].

Only the School-1 children were specifically encouraged to produce some deductive statements, by requesting their personal viewpoints for the purpose of practising the generic form as illustrated in **Transcript-2** above and **Transcript-20**. As a result, these children reasoned mentally by making inferences and hypotheses. **Reasoning markers are underlined.**

#### **Transcript-20**

*[inferential utterance]*

Unknown: I think the present is good for me / *[elliptical statement: 'because' is implied]* i-in the present they have more / erm a more range of food than in the =Tudor times= *['more...than', comparison]*  
*['I think the present is good for me because there is a wider range of food than in Tudor times']*

As Teacher-4's tight questioning diminished during the latter part of the lesson, the children engendered some extended deductive utterances such as the following:

#### **Transcript-21**

*[hypothetical utterance with 'if']*

Joyce: if you had cancer / or some really bad illness / there wasn't as much doctors and you didn't have *[missing: "the same"]* cures that we have

The findings confirm studies on cognition which indicate that reasoning is affected by social context. [Donaldson, M.,1987; Donaldson M.L. 1986; Perret-Clermont & Schubauer Leoni, 1981]. Reasoning is hampered when verbal interaction does not respect normal communication [Light & Perret-Clermont, 1991]. Reports on classroom research involving direct observations give evidence of pervasive features of classroom discourse revealing “a clear boundary between knowledge and ignorance” [Edwards & Westgate, 1994, 2<sup>nd</sup> edn, p.47]. The teachers were being didactic, imparting the rules of writing by direct instruction which, as mentioned in **Chapter 1**, would be a hindrance rather than a benefit, because the method clashes with effective learning processes [Bereiter & Scardamalia, 1987; Scardamalia & Paris, 1985; Wood & Middleton, 1975; Gee, 1997].



## *Analyses of Peer Interactions: Deductive Reasoning and Shaping the Genre*

To promote cognitive activity and mental reasoning the experimental children were invited to try out preparing for the writing task through intersubjective social interactions in small groups of three. The purpose of the collaborative preparation, contrary to research by Barnes and Todd [1977; 1995] and Mercer et al. [1999], was not to ‘agree’ or achieve consensus but precisely to express a personal viewpoint and defend/support it. Another object was for the children to communicate independently and purposefully, among equals. It was anticipated that the phrasing of the topic questions would implicitly lead the children to conform to the genre [Wilkinson, 1986a; Freedman & Pringle, 1989; O’Rourke & O’Rourke, 1995; Dehler, 1996; Dixon & Stratta, 1982a]. The essay writing topics in the four schools were tied in with previously covered History syllabus.

As mentioned in **Chapter 2**, each child was given the printed topic question in its entirety to be used for support during the interactions [Barnes & Todd, 1995], at the end of which it was collected. One of the children read the question aloud before the interactions commenced. The topic question was **not** explained before the interactions. The two audio-recorders were usually switched on by the children before the interactions began. Particular features of the peer interactions are found in **Appendix 4.1**.

**Following are the complete topic questions:**

### **School-1, Year-5 pupils**

Which of the two, the **Tudor times** or the **present**, [do you think] would best suit you to live in? Give reasons for your preference, and why you disagree with the other ways of living, by using examples of *customs, attitudes, living conditions, ways of thinking etc . . .* from both

periods. Base your discussion on your knowledge of the two historical times, the **Tudor times** and the **present**, their advantages and drawbacks.

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### **School-2, Year-5 pupils**

Would the **1940s** be a better time for you to live in than the **present time**? Give reasons for your preference, and say why you disagree with the other conditions and ways of living. Use examples from both times, the **1940s** and **1990s**, their advantages and drawbacks.

### **School-3, Year-6 pupils**

Which of the two, **Victorian** or the **20th century** industrialism produced less damaging human and environmental disasters, do you think, and which period would therefore be a better time for you to live in? Give reasons for your preference by using examples from the periods, and say why you think the period you have not chosen has produced worse human and environmental damages. Base your discussion on your knowledge of 19th and 20th century industrialism, their advantages and disadvantages.

### **School-4, Year 6 pupils**

Which of the two, the **Norman times** or the **present**, [do you think] would be a better place for you to live in? Give reasons for your preference, and why you disagree with the other ways of living, by using examples of *customs, attitudes, living conditions, transport, ways of thinking, governing, warfare etc . . .* from both periods. Base your discussion on your knowledge of the two historical times, the **Norman times** and the **present**, their advantages and drawbacks.

**TABLE 4.1 - Reasoning instances and deductive utterances.**  
**[seconds expressed in decimals]**

REASONING INSTANCES and DEDUCTIVE UTTERANCES							
	Talking Duration	Reasoning Instances	Reasoning Instances per 10 minutes talk	Inferential Utterances	Hypothetical Utterances	Total Deductive Utterances	Deductive Utterances per 10 minutes talk
<b>School 1</b>							
<i>Teacher-led lesson</i>	20.55	33	16.06	13	4	17	8.27
Peer-group A	20.95	340	162.29	95	54	149	71.12
Peer-group B	23.37	290	124.09	50	46	96	41.08
Peer-group C	20.88	122	58.43	31	15	46	22.03
<b>School 2</b>							
<i>Teacher-led lesson</i>	29.58	44	14.87	7	6	13	4.39
Peer-group A	26.33	298	113.18	58	32	90	34.18
Peer-group B	22.53	234	103.86	45	33	78	34.62
Peer-group C	22.10	195	88.24	61	10	71	32.13
<b>School 3</b>							
<i>Teacher-led lesson</i>	15.53	5	3.22	3	2	5	3.22
Peer-group A	23.50	169	71.91	50	2	52	22.13
Peer-group B	23.40	224	95.73	52	15	67	28.63
Peer-group C	20.45	203	99.27	70	14	84	41.08
<b>School 4</b>							
<i>Teacher-led lesson</i>	22.87	46	20.11	9	5	14	6.12
Peer-group A	17.78	277	155.79	61	27	88	49.49
Peer-group B	17.92	258	143.97	60	23	83	46.32

As shown in **Table 4.1**, the engendered instances of reasoning and deductive utterances during the peer interactions outnumbered those of the controls, even for the talk which would be considered unsuccessful [1C and 3A, **Appendix 4.1**]. The reasoning which the children engaged in was determined by the accomplishment of the interactions. As shown in **Table 4.1**, therefore, the most successful interactions were those of peer-groups 1A, 4A and 4B.

As expected, the children who interacted in small groups produced sustained individual and joint speech, were able to give explanations for their viewpoints and were therefore involved in mental reasoning. With two exceptions [1C, 2A: **Appendix 4.1**], it was found that the peer-groups expressed opinions from the interaction’s onset. These first viewpoints were supported, explained and instantiated. By replying to the topic question, whether at the beginning of or at any time during the interaction, thus by stating opinions about preference, the children were giving evidence followed by disagreement or approval. Both sides

of the question were discussed and the children were hypothesising and making inferences.

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When Anna expresses her viewpoint about which era had caused less human and environmental disasters, she supports her opinion by providing evidence for a positive as well as a negative point and uses inferential statements. By replying to the question, she was therefore already implicitly employing the genre.

### **Transcript-1**

**3A**

[03] [*some laughter*]

Anna: [05] I think / that the Victorian erm period / caused less environmental disasters // but / the 20<sup>th</sup> century caused no no // it's a bit // yeah the 20<sup>th</sup> caused less human disasters because children don't have to work in the factories // but / erm / the 20<sup>th</sup> century causes more environmental disasters / like [*such as*] pollution / and // so / eh // // [*two inferential utterances, one with 'because', the other can be rephrased as: 'there is pollution, so there are more environmental disasters'*]

In **Transcript-2**, opening statements also state opinions substantiated by evidence.

### **Transcript-2**

**3B**

Darren: [03] erm I think 20<sup>th</sup> century is better than the Victorian times of disasters because // it was all // erm // like [*for example*] messy // [*missing 'because'*] they didn't really know what they were doing / but in the twentieth century / they've got it all organised / but in the Victorian times / they just em took people off the streets / and / took them to work / so I think erm the 20<sup>th</sup> century is better / but they do have wars and [*so*] that isn't very good  
[*Darren produces four inferential utterances, 2 with 'because' and 2 with 'so': 1. "the 20<sup>th</sup> century is better because it was messy" 2. "...it was all...messy because they didn't know what they were doing"*]

3. “the people are working instead of being in the street so the 20<sup>th</sup> century is better” 4. “there were wars in the 20<sup>th</sup> century so that is not very good”]

Cathy: I prefer the Victorians because rich people had big dresses and I like big / dresses / and / but the 20<sup>th</sup> century erm // there isn't / not many / not many children go to work or anything / so / you go to school and OK you can have it like [*for example*] more fun and there are places you can go to for like [*such as*] entertainment and stuff / but you get wars and very like places like [*such as*] Kosovo and stuff / so erm // it's a bit erm I still [*nevertheless*] prefer [*suggests comparison*] the 20<sup>th</sup> century though / cos em children are much more lucky [*comparative*] in the 20<sup>th</sup> century instead and it's not / it's much cleaner / there's more like vaccinations and you / become // and // more healthy and you can go to the doctor's and stuff / to / get [*in order to get*] medicines and [*but*] the Victorians and trying to couldn't and stuff.  
[Cathy produces 4 inferential statements while supporting opinion, two with 'so' and two with 'cos']

The pupils were thus able to give explanations and make deductive statements. They were also arguing the advantages and drawbacks and were therefore tacitly modelling the written structure. [Also Appendix 4.2]

The elucidated trend was generally followed by the use of markers such as “but”, and “well” as Phillips [1985, p.70, 71] indicates. In both cases the child implied understanding of the partner's former viewpoint, but also either wanted to oppose it, or take a different or complementary stand. This is demonstrated by the ensuing explanatory statements. The children submitted new stances where other suitable justifications were examined. Agreement in this study, however, was represented by ‘yeah’. The children were therefore involved in both dissension and co-operation which induced them into producing reasoning utterances showing that they were thinking and cognitively active [op. cit.; Donaldson & Elliot, 1990]. The transcriptions confirm studies and descriptions, indicating that children's speech is frequently elliptical, however **not** that

**Transcript-3** is an example of disagreement. After Nigel’s opening statement about both historical periods having their advantages and drawbacks, thus being equal as he says, Colin disagrees. Whereas Nigel states his standpoint then supports it, Colin gives the facts or evidence first then concludes with his viewpoint marked by “so”.

### **Transcript-3**

#### **1B [disagreement “but”, both sides of the question, deductive utterances]**

Nigel: [*inferential statement*] but erm / there wouldn’t be so many crises because like they wouldn’t have that many weapons like [*such as*] the Kosovo crisis that is going on now

Colin: [*hypothetical utterance with ‘if’ followed by inferential statement with ‘because’*] but what I think is / you know / if only one [015] wretched kid in ten / if they were all born on the same day would live up to forty? / cos of the bad health conditions? [*Did you know that in Tudor times, if ten children were born on the same day, one of them would live up to the age of forty and this was because of the bad health conditions?* ]

Nigel: not bad / = things change=

Colin: [*inferential statement with ‘so’, Colin derives conclusion - which is his viewpoint; hypothetical statement with ‘once...would’ meaning ‘if...would’; another inferential utterance with ‘because’*] =so= / but so and erm / so say the registers / so it’s really / so I think nowadays is better // but it the problem with nowadays is say [*suppose, if*] all two major countries get into war / once [*hypothetical*] they know how to make really extra bad weapons like [*such as*] nuclear bombs / it would destroy / it would kill every one in the world but that would never in Tudor times / because they didn’t have the power to do that

## 1A [agreement and providing reason]

Gill: [*speculates, hypothesises with 'if...would' - this is followed by inferential utterance with 'because'*] If I lived in the Tudor times / erm I would think that erm / I would be quite happy because you don't always have to / erm // use a car and erm / with now [*meaning "whereas now"*] / you have to pay more money for things

Simon: [*agrees with Gill by using 'yeah', states reason why, thus inferential statement*] yeah and it would be a waste of money in eh now because you have to pay the petrol when in Tudor times you didn't have to pay for petrol / you just I mean you don't / you have to pay food for the horse but that's not exactly as much as petrol cost

.....

**Transcript-4** shows how Simon agrees with Gill. In the above transcripts, the children were compelled to reason deductively when stating opinions. In **Transcript-5**, Colin's "well" shows he understands Susan's statement but wishes to show other probabilities. Inferences are jointly produced.

**Transcript-5**

## 1B [joint reasoning and considering other possibilities]

Susan: if you married and someone divorced // you / it's more than likely [ '*more than likely*' = *certain*] you would [*hypothetical: 'if..... would'*] be beheaded / let's say [*for example*]

Colin: well that depends [*hypothetical connotation*] what the King's like [*beginning of inferential statement which Nigel later continues with 'cos'*]

Susan: yeah

Colin: yeah

Nigel: [*continued inferential utterance with 'cos' which Colin had begun and hypothetical statement with 'if...wouldn't' followed by the beginning of another inferential utterance with 'because'*] mm / cos if it's that kind of law / that wouldn't be that wouldn't be an

impossible thing // but [*however*] I think I'd / for now / I'll stick to the present because

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Unknown: yeah

Nigel: [*continued inferential statement begun above*] it didn't have beheading .....

The experimentals were involved in rational discourse because their opinions necessitated support, using longer exchanges than with the teachers, and with no clear-cut signs of ending [Donaldson, 1987, 2<sup>nd</sup> edn; Phillips, 1988]. In asserting viewpoints about preference, the children were providing recalled evidence followed by conflicting opinions or approval, considering other possibilities, were hypothesising and making inferences and so on. Both sides of the question were discussed. Thus a set of Wilkinson's criteria [1986b] was verbally modelled or rehearsed.

To give evidence in support of their propositions the children were constantly found efficient in reasoning, not merely by remembering information in context to support opinions, but also by making **analogies** and **comparisons** to illustrate their views. Just as 'because' allows the speaker to be more specific, giving explanations and reasons for the standpoint made, Phillips [1988, p.77] considers the cohesive device "like" to elaborate the speaker's propositions and to mean "for example". **Transcripts 6, 7 and 8** contain examples of the different uses of "like" which contribute to elaborating explanations and evidence.

#### **Transcript-6**

##### **3B [analogy to illustrate]**

Darren: well most weapons are invented for us / like [*analogy*] they might be used to kill chickens / to eat



## 2A [analogy]

Debbie: [*at the dentist's*]. . . . .

that might sting for a bit / and after it goes all normal [*missing 'so'*]  
you can't feel anything

Lynn: like [*such as, analogy*] a blood test [ . ] [227]

## Transcript-8

## 4A [analogy]

Paul: . . . . . they wouldn't have thought say [*for example*] their cavalry  
might have been like what they were calling nuclear bomb [*Norman  
cavalry was like present nuclear bomb*]

/ cos they may have thought their cavalry was sort of / invincible

To substantiate viewpoints the children were continuously **contrasting** and **comparing** as in Transcript-9.

## Transcript-9

## 1C [contrast: governing during Tudor times and today]

Lily: yeah / and erm / now there's the kings and queens don't really rule  
the country as much as [*'not...as much as' quantity comparison*] they  
did er in /

Unknown: Tudor times

Lily: Tudor times because normally in Tudor times the kings and  
queens made all the decisions and [*whereas, but*] now the prime  
minister gets to do all the things

As they were contrasting items in both periods, they were commenting on their **drawbacks and advantages**. Both **quality and quantity comparisons** were made. In comparing, they were arguing **both sides of the question**. They were treating the points 'for' and those 'against' within the same context as the comparison. This was practice in classifying recalled information as in **Extracts 10 and 11**.

**3A [advantages, disadvantages]**

Dell: disadvantage in Victorian times / that they drank dirty water / that has mud in it

Anna: but erm now in the 20<sup>th</sup> century period / we er have our water cleaned / and it's going through like a cleaning process [249]

**Transcript-11****3C [advantages, drawbacks: factories, both eras]**

Louis: without factories we wouldn't have what we have here / because factories made all these things

Jane: how do you know?

Louis: factories have advantage

Jane: there is spoiling the environment quite a bit / and it wasn't as much [*denotes contrast*] in Victorian times / but / because of the ways they treat they treat people in Victorian times / and how they can damage humans in Victorian times // [*elliptical, 'so' missing*] the 20<sup>th</sup> century was more appropriate to live in [281]

Patricia: in a way I agree with Louis because / factories do have an advantage as [*suggests analogy*] in furniture and stuff like that / but / and you know / wood and / wood factories and you know / wood factories and stuff like that / computer factories / so if you know / if you just / but / there is a disadvantage too / so it's really a split decision which you now can just [.]

Louis: factories / it's just that factories made better medicine for us like when we were born / they give medicine that we can live on / and not die [*in order not to die*] when you're about a year old

Unknown : what

Louis: and in the future you're going to get more things / and [*because*] obviously you're going to need them all

In **Extract-11**, Jane synthesises from what she had previously said about the pollution caused by factories at present and their effects during the Victorian

period as far as mistreating children was concerned. However, Patricia sides with Louis who views factories as beneficial. Thus the sides ‘for’ and ‘against’ industry are argued.

The children were also involved in mentioning straightforward advantages or drawbacks as in **Extract-12**. This was also an indication of processing material. They were classifying or associating information of the same sort. In assembling the positive points within the same context, they were thinking in complexes [Vygotsky, 1986, new edn]. However, examples of this classification category were minimal.

### **Transcript-12**

#### **2A [straightforward talk: positive points-present]**

Debbie: and we’ve got all jewellery

Lynn: nice clothes and

Peter: we’ve got lots of them now [066]

Debbie: we’ve got lots of pubs [*laughs*] // and nice buildings

Unknown: yeah

Because they tended to compare, the children were mainly involved in the more intricate types of processing. They were inclined to “single out” associated, yet different or contrasting, characteristics among both eras and were able to employ them side-by-side in their utterances. The pupils were thus already developing “potential concepts” [Vygotsky, 1986, new edn, pp.135, 145]. The 3B children were at some point engaging in a series of successive comparisons, discussing pros and cons and deriving conclusions:

### **Transcript-13**

#### **3B [successive comparisons]**

Darren: ehm / in the 20<sup>th</sup> century / erm / people don’t just throwing rubbish on the floors / [ *‘because’ missing*] most people are throwing them in the bin / but in the Victorian times / they just throw anything anywhere

.....

Cathy: in Victorian times they would throw the rubbish in the rivers and stuff / and then people would go and drink from it / so that's why they probably got quite a few diseases from the stuff / in the 20<sup>th</sup> century you get tap water / and clean / filtered water as well / and sometimes you get filters for filtered water [*conclusion with 'so'*] so it's much cleaner for drinking / and stuff like

Tony: in the Victorian times there's a lot of thieves around cos / they hang around for money or anything / and a lot of homeless people / more than there is today // and there would have been quite a lot of illnesses and things catching / then

Darren: in the 20<sup>th</sup> Century / they made new inventions / which [*'so' deductive in meaning*] erm could save erm work / like [*such as*] the steamer you don't have to keep on heating it up // from the fire and like [*analogy*] a vacuum cleaner [ 119] / [*conclusion with 'so'*] so you don't have to keep on sweeping everything up / and in the 20<sup>th</sup> century / there are more people who have got things / than [*comparative: 'more...than'*] there were in the Victorian times.....

Following is an illustration which contains many quantity comparisons within the same turn-taking:

#### **Transcript-14**

##### **1A [quantity comparisons: weapons]**

Simon: if I had the choice I'd [*'if...I'd', hypothetical*] probably live in Tudor times cos you get to have more adventures and do more things / OK / erm you get to use more powerful weapons these days but that would only cause [*refer to item (h) reasoning models*] more damage / with swords and arrows and spears / it doesn't do as much damage as the nuclear bomb [*suggests contrast*] // [*'because' missing, elliptical statement*] the nuclear bomb could kill half the / England where [*whereas*] [137] swords and spears could [*hypothetical connotation*] kill only a few people

By contrasting quantity and quality the children were also reasoning and thus able to deduce their conclusions in reply to the topic question [Bryant & Kopytynska, 1976, in Donaldson, 1987, 2<sup>nd</sup> edn]. In **Transcript-11**, Patricia deduces that ‘so it’s really a split decision’ as a result of weighing the quality contrasts regarding factories.

Likewise, both 1B and 4B groups, were finding that both eras were ‘equal’ or the ‘same’ in the number of advantages and drawbacks attributed to each period, before achieving their final conclusions. Daniel finally thinks ‘they’re both as even as each other’ after the last piece of evidence, ‘mothers don’t do the washing in the Thames’.

### **Transcript-15**

#### **4B [similitude]**

Daniel: I’m for both actually / because sometimes in the Norman times a lot more things were clean / cos / most of them used to washing in the rivers so that must [*reasoning models item (a)*] prove that they were clean enough to wash / you wouldn’t get your mom going down into the Thames washing everything

[*laughing*] // but I quite like the present as well but I think they’re both as even as each other [*denotes equality*] [ . . ]

Christine: yeah

Daniel: so they have advantages and disadvantages

By comparing, the peer-group children were rehearsing argumentative writing strategy in considering both positive and adverse sides before concluding [Wilkinson, 1986b].

As demonstrated, stating an opinion activated the children to substantiate it by giving reasons why, generally with the use of ‘because’, and to hypothesise, deduce and derive conclusions. This pattern was noticeable all the way through all the interactions, however to a smaller extent with 1C and 3A who gradually improved their communicative patterns. The generated logical reasoning was associated with the replies given to the other interlocutors. The extracts

corroborate Wimmer and Perner's findings [1983, in Donaldson & Elliot, 1990] that through verbal argumentation, the children were capable of delimitating their own opinions from those of their partners and therefore inevitably employed deductive statements to substantiate their viewpoints. They provided "Evidence" [Phillips, 1988, p.78]. They were taking one another's utterances into account, not 'displaying' information as in the classroom. These utterances served a social function, not the "class-transmitted type" discourse with short exchanges [op. cit., p.75]. The children were decentring to consider other speakers' opinions in order to continue interacting socially [Light & Perret-Clermont, 1991]. They agreed, and also had conflicting opinions and were thus involved in 'socio-cognitive conflict', leading to deductive reasoning. Each participant's inferential utterances contributed to the joint rational logical sequence to achieve concluding statements.

**Extract-16** illustrates how Stephen derives a conclusion after considering the pros and cons. **Transcript-17** demonstrates a jointly reached conclusion and generalisation, achieved by the sequencing of engendered information. In **Transcript-18**, Jenny generalises as a logical result of the discourse content. Thus other essential standards for argumentative structure were met during the peer interactions and the children were orally practising them.

### **Transcript-16**

#### **2C [achieving conclusion after weighing pros and cons]**

Stephen: I er don't know really because the 1940s would be better because there's not much pollution / but the 1990s would be better for children / because there's more and and entertainment and and the 1940s would be better for for the animals because they'd have more space too like [*denotes analogy*] Noah's arch where / whereas now / they're building cities where where animals live and should be there / well [*'well' = therefore, so, thus concluding*] certainly the 1990s would be better for us

**2A [deriving conclusions, generalising by disagreement/collaboration]**

Debbie: well maybe not big violence like [*such as*] wars and stuff / but there's still fights / but not =wars=

Peter: =murder= / robbers and [ . . . ] there is / but they're not =with bombs=

Debbie: =not with big= bazookas and stuff like that

Lynn: not with bombs and everything / cos there's murders / robbers / but nowadays there isn't as much as [*comparative*] that cos there's no bombers

Debbie: there still is bombs and people who do make them

Unknown: yeah

Debbie [*argues serenely*]: so my opinion is [*I think*] there's not too much that has changed [*achieves conclusion*]

Lynn: [*Lynn responds, appears to agree*] like [*such as*] in Kosovo / there's been / took out there / how the civilians isn't it? / I don't know //

Unknown [*probably Peter*]: but in the 1940s there's worse [*comparison*] ones

Debbie: it's still not too different now [*Debbie maintains her position*] [153]

**Transcript-18****2B [generalising]**

Jenny: and and the families / could / then were huge

Lee: I know

//

Karen: I mean like I didn't really understand it / but I suppose you can't help it / there were all these poor people and [*mimics*] they were crammed and they have so many children and like but why didn't they just have one all along? / and then life wouldn't be that rough would it?

Jenny: I know but it's not that // it's just a way of life [*generalising*] /  
it's natural [*generalising*]

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Karen: yeah [*laughs*] you could say that

//

you're bringing more [*comparative*] little species to the house  
[*explanation of generalisation*]

Unknown: yeah

//

Jenny: that's the world [*generalising again*]

Moreover, some children were able to synthesise by using 'altogether' and 'overall', perhaps this being an exercise to help them logically arrange/classify their ideas in the written argument and thus derive a final conclusion. But most, were actually constantly sequencing as they were deducing, using "because", "lead to" and "so". In generalising and synthesising, they were engaged in advanced abstract thinking [Vygotsky, 1986, new edn].

#### **Transcript-19**

##### **3C [sequencing]**

Jane: .....the children breathe them in / and which can give them lung cancer / which can lead to a heart problem which can lead to death

#### **Transcript-20**

##### **3A [synthesising]**

Anna: so / I think altogether / erm it's much better to live in the twentieth century / even though there's always pollution / and environmental disasters / less humans disasters than [ '*less...than*', *comparative*] in the Victorian times / so / I'd prefer [*denotes comparison*] to live in the twentieth century



## 4A [concluding]

Adrian: altogether / I would think the present much better / than / the Norman times

Paul: overall I think the present a lot better / in a lot of different ways / but there are some disadvantages / but there's more advantages than disadvantages [generalises: reasons for preferring present]

Kim: yeah / .....

## Transcript-22

## 1B [generalising, deducing]

Nigel: well on the whole er / I would really prefer [*comparative connotation*] the times now

As the transcripts indicate, the children were engaged in articulating most if not all the argumentative genre criteria elucidated by Wilkinson [1986b]. Moreover, to give evidence and reasons and generate deductive utterances in support of their propositions, the children were inherently recalling relevant and detailed subject matter. To achieve this cognitive performance, each child was empowered by the other speakers who either shared or had alternative opinions.

## *Analyses of Adult and Peer assistance – Pedagogic Significance*

Within this intersubjective condition, assistance was provided by the more knowledgeable peers. Those were not necessarily the high achievers. For example in 1A, Simon, a low attainer, had actually led the interaction. His contributions allowed Group-1A to surpass all the other peer-groups in the production of deduction reasoning [Table 4.1] However, the achievement of 3A's interaction was due Anna, a very high attainer, who showed effective verbal articulation and reasoning standards.

The first part of this chapter concerns the **researcher's role** in the peer-group learning context and the second describes **peer assistance**.

### **RESEARCHER ROLE and SUPPORT**

The researcher, hereinafter designated as the 'adult', was sitting among the children to take field notes and monitor the audio-recorder. She attempted to approximate the normal teacher situation, where the teacher establishes the learning setting in activities for the children to take part in [Rogoff, 1991]. The situation was one in which the children would participate with ease but in an ambitious undertaking, within their 'zone' of ability, to reply verbally to the topic question in preparation for the written task. It was thus a purposeful task performed among companions, in familiar circumstances, where they would interact and reflect without being subordinated to teacher-instruction.

The children's contribution to the "problem's solution" or "proleptic instruction" [Rogof & Gardner, 1984, p.101] occurs when learners carry out the

task on their own, supervised by the practised adult, demonstrating how to perform the task while it is being performed. The talk *per se* served the purpose of the implicit learning process. However, the adult did not indicate how to carry it out apart from what is mentioned in the Methodology section [Chapter 2]: rudimentary rules of conversation were emphasised during the trial talks. As mentioned earlier, because of time constraints, the task directions were not repeated on data-collection day.

The interactions occurred with the tacit understanding that in normal classroom situations, the teacher would naturally go from one group to another “questioning, encouraging, explaining” [Barnes & Todd, 1995, p.108]. S/he would listen to what is going on and make his/her contribution so that “the setting and revising of goals and sub-goals” would be “an ongoing and recursive process as the various components interact with each other” [Chang & Wells, 1988, p.102].

Thus approximating this situation indicated that some minimal ‘scaffolding’ would be permissible. In our case, it was mainly to ensure that the interactions began, to prompt content or remind the topic question after a pause or when the participants had greatly digressed. But to decrease problems of differences between adult and children [Maclure, 1994], and for the purpose of the study, the children were left to tackle the interactions by themselves.

When the children had ceased interacting, the adult’s assistance can in some ways be compared to the teacher who guided the child to perform the task of putting the pyramid blocks together [Wood et al., 1976, p.93]. The teacher only assisted when the learner was unable to do more. Like the teacher who helped the younger pupils more often than the older ones in Wood et al.’s research, the adult in our experiment intervened more frequently with the unsuccessful talkers than with the competent ones.

Similarly [op. cit], the adult (a) enticed the interactants, in our case with the challenging topic question, and gave them the opportunity to state personal

opinions; (b) diminished the learners' chore to the phase with which they could cope; (c) called them back from extreme digression to keep them within their objective's track because of time constraints [rephrasing the topic question]; (d) emphasised task characteristics [reminding the topic question, or prompting new subject of discussion]; (e) making them feel at ease [smiling, at times showing verbal and expressive approval, and even laughing with them] (f) However, **unlike** the teacher in Wood et al.'s research, and the 4 teachers in this study, the adult here **did not** model the task for the learners to copy and **did not** instruct the argumentative structure.

In normal classroom situations, children would be permitted to interact for much longer durations than the approximate 20 minutes allocated to each peer-group in the present research. Moreover, the children engaging in such peer interaction would generally be trained in group discussion skills. However, this was not the case with many peer-group children. There were also reactivity effects to be dealt with, such as Rachel's laughing fits and 3A's long pauses.

### Transcript-1

1C

Jeff: and also erm / in a few years' time you can really have / erm / holidays in space [143]

Lily: yeah

Jeff: and

Lily: yeah

Jeff: but you could never do that [*hypothetical 'could'*] in Tudor times  
[*Rachel has laughing fit*]

Jeff: you couldn't even think of it

//

// [*9 second silence*]

Rachel: erm // I don't know what to say

Adult: what about food and drink?

When the children were not addressing one another, the adult occasionally asked the participants whether they agreed or disagreed with their partners in order to trigger more successful explanatory interactions: “do you agree?”

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The adult at times **reminded the topic question** or parts of its formulation so that the interactions might be guided by the question’s demands [Transcripts-2, 3].

#### **Transcript-2**

**1C**

Adult: so which do you prefer?

#### **Transcript-3**

**3A**

*[again silence]*

Dell: disadvantage in Victorian times / that they drank dirty water / that has mud in it

Anna: but erm now in the 20<sup>th</sup> century period / we er have our water cleaned / and it’s going through like *[analogy]* a cleaning process  
[249]

*[24 second pause]*

Adult: [254]*[reformulating the topic question]* the Victorians and nowadays had inventions how were inventions disastrous then and disastrous now?

The adult sometimes prompted subject matter to resume talk during long pauses, or to change a point that was discussed exhaustively, when time was running out.

#### **Transcript-4**

**3C**

Adult: *[prompting]* what about fertilizers // chemicals they use in agriculture now?

The adult occasionally arbitrated when a participant had lost a talking turn or during simultaneous speech. The adult's behaviour was essentially discretionary, improvised and rather determined by urgency and emerging circumstance. It did not abide by any particular pattern the adult had set herself, except for attempting to

1. ensure that the children were addressing one another
2. ensure that they replied to the topic question, with allowance of digression to some extent
3. incite subject matter when they were silent or when a change was required

On three occasions the adult corrected factual statements such as World War I: "that was in 1914". On others the pupils were guided to engage in comparing as in **Transcript-5**.

**Transcript-5**

1C

[*encouraging comparison*]

Adult: but not now / how is it different now?

At the end of each interaction, the adult requested the peer-group to make their concluding statements. In general, the adult took advantage of a pause to do so, because the next peer-group was at the door. She also did so gradually such as with 2A, who for some time would not cease talking. The children were told 'we're going to *try* to conclude' instead of 'shall we conclude?' to avoid an abrupt stop. The other example is in **Transcript-6**:

**Transcript-6**

2C

[*to gradually conclude*]

.....

Stephen: and and if you don't have any money you are really  
unimportant

Adult: so money counts a lot [*commenting on what was said before*]

Agnes: yeah

Adult: do you agree? [*to encourage final explanations*]

Stephen: and there's more people on the streets now be because of the  
parents / they like bully them / and they and NSPCC's just come up  
with a new thing / it's 'care for your children stop full stop'

[*incomprehensible talk*]

Adult: [*to conclude*] I think it's time to conclude [321]

Unknown: the 1990s

Stephen: who's going to start?

Adult: start Rick

On some occasions the peer-groups' concluding statements were accompanied by the adult's intersubjective statements, or in the case of 2B, 3A and 3B, by reiterating the whole or facets of the topic question.

#### **Transcript-7**

##### **2B**

Adult: think of the good things as well

Lee: there's **all** the **fields** in the 1940s / you can go in **them** and  
play.....

#### **Transcript-8**

##### **3A**

Adult: right then Dell / what is your conclusion?

Dell: I'd like to live in the 20<sup>th</sup> century because / there / we don't have  
to go to work / and

//

// [*pause*]

Adult: remember to go to the point / it's the human disasters caused by  
industrialism

Dell:.....

The number of adult interventions likely to have affected the children's mental activity is as follows [**Appendix 5.1**]:

- 1A=3: 2 to ask the children to agree or disagree so that they might address one another  
1 to prompt
- 1B=5: 4 to prompt  
1 to allow them state opinion, encourage argument, thus keep in line with the topic question
- 1C=16: 1 to encourage responding to other participants 'do you agree?'  
5 to remind or reformulate topic question [3 with "which do you prefer?" 2 after pauses]  
1 to encourage comparison "how is it different now?"  
1 to encourage elaboration "what do you mean by 'things?'"  
8 to prompt [5 after pause, 3 to change subject]
- 2A=11: 1 to begin interaction  
1 to encourage responding to one another "do you agree?"  
1 to encourage comparison  
3 to remind topic question [1 of which after pause]  
5 to prompt for content [4 of which after pauses]
- 2B=11: 3 to call back from diversion [1 as prompt, 2 as recaps "let's go back to..."]  
4 to prompt [1 of which after pause]  
1 to encourage comparison  
2 to remind topic question [after pause; due to diversion]  
1 to comment during concluding statements
- 2C=11: 1 to encourage comparison  
2 to remind of topic question [1 of which after pause]  
2 to recap leading to subject change  
2 to induce comparison rather than straightforward description [1 of which after pause]  
1 to induce stating of viewpoint  
3 to prompt [2 of which after pause]
- 3A=14: 9 to prompt [1 straightforward, 7 after pauses, 1 to help struggling child]  
2 to encourage participants to address one another "do you agree ...?"  
2 to remind the topic question  
1 encourage elaboration
- 3B=8: 4 to remind, rephrase, ask topic question  
4 to prompt
- 3C=8: 5 to remind topic question after digression or to keep to the point  
3 to prompt new subject
- 4A=1: 1 to prompt
- 4B=1: 1 to prompt after pause

Referring to **Table 4.1, in Chapter 4**, it appears that the reasoning instances engendered by the peer-group interactions are indirectly proportional to the number of adult-supporting interventions. For example, Groups 1A, 1B, 4A and



4B who have had the most successful discourse have received the least amount of support, whereas the 1C and 3A interactions, who were relatively unsuccessful, have received the largest quantity of assistance.

The adult also had to cope with technical problems. The first adult intervention in peer-group 2A's interaction would have been detrimental had it not been remedied. This can be illustrated by the incident when 2A remained silent, while attending the commotion caused by a whole group of children waiting outside their classroom. As the tape-recorder was already running and time was pressing, the adult had to initiate talk. The most adequate way to have done so would have been to repeat the topic question aloud to the children. Instead, she said, "so // the 1940s was what?" This question induced the children into making comparisons at first and then straightforward descriptions instead of stating opinions followed by evidence. Moreover, one audio-recorder was not certain to be operating. The interlocutors ceased talking, rewound the tape to find out, then turned the recorder on again.

The adult also intervened to request silence from the people who were coming in or asked them to leave. Participants were sometimes asked to speak up.

The above elucidates the nature of the adult's assistance and interventions. It will now be shown how the children helped one another before writing their arguments independently.

By interacting, the children were assisting one another in various ways.

### **Socio-cognitive conflict**

First, as mentioned in the Literature Review and as demonstrated in **Chapter 4**, by replying to the topic question and addressing one another, the children were exposed to one another's different and contrasted opinions, even if not entirely opposed. Consequently, through interaction, they were involved in defending or adjusting their beliefs or viewpoints according to the received feedback. In this process, the children were implicated in recognising, sharing and exchanging one another's opinions, information, judgements and understanding. In this situation, called "socio-cognitive conflict" they were able to bridge gaps and increase their mental operations [Doise et al., 1975]. In the present research, 'decentring' of opinion or socio-cognitive conflict engendered not merely reasoning, as previously mentioned, but also verbally expressed knowledge, either remembered or supplied by the partners as explanations to support their attitudes. They were building on earlier intellectual activity in order to develop further ways of rational thinking and extending knowledge [Johnson & Howe, 1978], in our case, we might speculate at this point, to conform to the argumentative writing criteria.

In the following extract, the more Gill challenges Simon, the more Simon is compelled to react and logically defend his viewpoint. He is therefore led to exert higher intellectual functions. This is demonstrated by his increased intricate explanations, about the benefits of fire juggling despite its dangers.

#### **Transcript-1**

**1A**

Simon: well I prefer [*comparative connotation*] to be in Tudor times  
because you can just go into / the village square and watch people

doing acts like [*such as*] jesters where they swallow alcohol [216] /  
gets a torch and then blow it so it makes automatic flame thrower  
Gill: well I think that's er that's a bit dangerous actually / [*missing 'so'*]  
=you=

Clare: =you shouldn't= be doing that

Simon: I actually think they [222] should cos it entertains kids  
entertains adults / its makes them more popular / it does all several acts

Gill: but it scares young children though

Simon: not necessarily // young children might like playing with fire  
[*hypothetical connotation*] / I do

[*someone whispers, incomprehensibly*]

Gill: well I like Tudor times

Simon: so do I

Clare: so do I

Gill: [*laughing*] well I like Tudor times [*repetition*] because erm it's  
easier / as I said before but erm I don't think / I think it's a bit  
dangerous just for the fire around [228]

Simon: I don't see why cos / I mean / if you were a jester / you will a  
bit / I mean juggling [234] is an everyday thing / I mean if you were in  
the square everyday juggling / they could [*hypothetical: 'if...could'*]  
soon get tired and walk away / where [*whereas*] if you're doing  
different things like fire / juggling / throwing knives / sword fighting /  
all things like that / people'd be more interested [*hypothetical*  
'if...people'd... ']

**Extract-2** shows how the partners with the added distinct views, contribute with their own different knowledge. Conclusions are derived and knowledge is built on, modified or expanded – cars, pollution, animals on land, then animals in the sea. The speakers were bartering one another's information and bridging the gaps within the engendered knowledge:

2A

Lynn: well there's pollution and there's all traffic

.....

/ but in the 1940s there wasn't as much cars [*not as many, quantity comparison*] / so there wasn't as much traffic [*quantity comparison*]

.....

Debbie: erm / erm / would / there's a bad thing about having more [*comparative connotation*] models out and stuff like that now / than [*part of 'more than'*] in the 1940s / cos there / hardly anybody had cars / and there were only little minis / but now nearly every family in in the whole whole of Britain and Ireland

=has a car=

Unknown: =has a car=

Debbie: and they pollute a lot which [*same as 'so' or therefore'*] is kind of suffocate animals

Unknown: yeh

Debbie: and there are probably less animals around now than [*'less than', quantity comparison*] there was in the 1940s / so it wouldn't be polluted or anything [271]

Lynn: there's all gas oil tanks and everything that go in the sea / and if they crash they spill [*hypothetical 'if'*] it all into the ocean // and kill dolphins / seals / fish and whales // for them they couldn't afford that / oil / well we could [*probably*] / but not big big tanks of it / so

As argued in the Literature Review, the process occurs when incited by an outer component [*other interactant/s*] within an intersubjective social situation, here, among interacting peers, when socially equal in status, as a result of taking account of the partners' opinions. This interpersonal communicative activity is assumed to facilitate problem-solving, in our case, the written task [Doise et al., 1975; 1976; Light et al., 1979; Mugny & Doise, 1978; Light & Perret-Clermont, 1991; Perret-Clermont & Schubauer-Leoni, 1981; Light & Glachan, 1985].

To make themselves better understood they were also speculating and taking roles as when Paul attempted to explain why we would definitely find our era better than previous times. He was hypothesising and questioning to illustrate his opinion.

### Transcript-3

4A

Paul: yeah [074] but if you had a question and we were actually in the Norman times / and somebody else asked us which would be better the Norman times or the stone age times? / if I were a Norman / I would [*'if...would', hypothetical*] say that Norman times were a lot better

In **Transcript-4**, by conjecturing, he also explained the relativism of having 'good facilities' in present times. He thus attended to the "learner's needs" [Wood et al., 1995, p.569].

### Transcript-4

4A

Paul: but in it depends [*suggests hypothesis*] where we are / cos if we were in England / there would be [*'if...would', hypothetical*] / there's quite good facilities / there's not really very many homeless / people or anything / but if you were in say Brazil / outside Sao Paolo

Adrian: mm

Paul: there's lots of shanty towns

Adrian: yeah and

Paul: and they didn't really have any homes and there wasn't **any** toilets or **any** facilities / [*'therefore' missing*] **that** that must be quite [135] like the Norman times [*generalising as result of hypothesis, analogy*]

In **Transcript-5**, Jane imagines what she would do to protest against felling Amazon forest trees:

3C

Jane: .....as I said I'm going to sit in a tree / and I wouldn't come down until the government had made their decision // and if they say they're gonna chop it / then [*'if...then', hypothetical*] I'd say / I'd start getting my bow and arrows out now

[*all laugh*]

Unknown: if [*hypothetical*] you have any [*laughs*]

Lee asked his partners to “suppose” they were living during the war and that they “might be evacuated .....and let's say a bomb goes down”. The children imagined what it would be like without satellite TV, without sophisticated medication, with insufficient hospital beds. “Say you'd broke your leg,” Lee speculates and is helped by the other participants to exemplify. Clare declares that going back to Tudor times would allow them to know more about it. Like many of the children, she refers to the period as a place [“there”]. Gill speculates about a time-machine. Simon wishes to devise one to have a glimpse of Tudor times without being noticed. He wishes he could “pop in from one place to another when I wanted”. Karen supposes she was the Queen's daughter. Colin wishes to be King.

Karen speculates about going back in time and finding that no one would understand computer talk. She takes the role of someone in the 1940s and mimics to make herself better understood [Transcript-6].

## Transcript-6

2B

Lee: we we've got the computer now

Karen: yeah but / then times you wouldn't have done / and you would have made do what you hadn't / you wouldn't even know what a computer was // [*speculates*] if we travel back in time / we said [*mimics*] hello / do you want to come tomorrow to my house and play

playstation / it'll make a bit like [*mimics*] hey / what are you talking about? /so  
Lee: yeah

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Pat, too, vocalises to illustrate the difference between present and Norman times [Transcript-7].

#### **Transcript-7**

##### **4B [vocalising, imagining]**

Daniel: you're rather lucky [ '*because*' *missing*] you've got fast food like MacDonald's

Pat: you can't have like [*for example*] / having tea and cakes in the afternoon

Daniel: yeah

Pat: [*vocalising*] do you want to come in for some tea?

Daniel: yeah but they're not likely to go to MacDonald's in Norman times .....

they probably hadn't even heard of a beef burger

By hypothesising and mimicking they were taking roles, speculating about living in different times and pretend worlds. Play and imagination enhance thinking abstractly [Vygotsky, 1978]. It can also affect writing because "learning to write with" an "oral model" would be facilitating [Daiute, 1989, pp.5, 8; 1990]. "Play with reality" such as role-taking and vocalising is a useful aid. It releases anxiety and contributes to learning. It develops cognitive abilities by serving as a link between children's previous knowledge and what we anticipate them to learn.

#### **Digressing and joint knowledge**

Most of the children, but especially in 1A, 2B and 4A, were sometimes found to digress, as they gave examples, or simply because one subject during the interaction led them to talk about something else. In the following episode, the

children try to remember together, a known story/film to illustrate what they were trying to say.

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### **Transcript-9**

**2A**

Debbie: what was it called?

Peter: is it the one of the big shelters?

Lynn: or is it that one of the big family?

Debbie: yeah / that one

Lynn: I can't remember what that was called er

.....

Debbie: on a barge / and there was this lady // well I can't remember her name / called / wait a minute / well she found / what was it? / well at home they'd been bombed / or somebody was killed /

Lynn: oh yeah / the lady that was deaf / and she forgot to put the / black outs in the windows / she saw her enemy and just bombed her  
[134]

Stephen states an aphorism initiated by the culture.

### **Transcript-10**

**2C**

Stephen: and there's more people on the streets now be because of the parents / they like bully them / and they and NSPCC's just come up with a new thing / it's 'care for your children stop full stop'

In his interlude, Louis uses information which he knows well.

### **Transcript-11**

**3C**

Louis [*has Brazilian mother*]: in the Amazon / because I know it / the Amazon has one of the most rarest animals in the world / there's the king cobra snake / and it's mouth is about **that** thick / it can eat a cow in one gulp [*makes swallowing sound*] / and also but I wouldn't think they would chop trees down because the trees had the government on it



/ a long long way before my grandma was born / way way way [198] /  
and so I wouldn't think they would chop it down that much

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Referring to a jointly known item [a razor] Karen chants a known television advertisement.

### **Transcript-12**

#### **2B**

Karen: no / they didn't have their hair shaved then

Jenny: they did / they did // [100]

Karen: it says if they didn't have a razor / you know what I mean / a  
razor

[*incomprehensible talk*]

Karen: yeah

Lee: they just

Jenny: really short like they do

Karen: doubtful / it takes / you take one stroke [*chanting Gillette TV  
advertisement*] / it takes three / it didn't take / it was that sort

Debbie recounts what happened when the bomb in Manchester “blew up right near my Grand-dad's” and she was there. A description of Norman eating habits leads to comments on long French meals experienced during a holiday. The children divert attention to French eating customs and their own.

### **Transcript-13**

#### **1B**

Colin: they'd just grab anything and eat [294]

Unknown: yeah

Colin: they mixed up other people's

Nigel: it's a bit like [*analogy marker, elliptical, 'the French' missing*] /  
cos the French / what last time we went to France / they didn't have  
many McDonald's around because that's a fast food store / and they'll /  
the French actually like to sit down and have a meal while they were  
talking to each other =and you=

Colin: =they spend ages=

Nigel: yeah / they like to have a long kind of big deal over a meal

Susan: yeah like [*such as*] we ah have now

Nigel: not always / cos we

Colin: not always /

[*simultaneous talk*]

Colin: depends [*hypothetical connotation*] what type it is / like [*such as*] Christmas you would

Nigel: yeah and / like [*such as, analogy*] a Sunday roast  
=or something=

Colin: =yeah= [301]

Nigel: er but like [*for example*] if [*hypothetical: 'if...we'd'*] we're  
going into town / and shopping and we've had about an hour in town /  
and it's come up to lunch time / we'd just pop into something like  
[*such as*] er / the Debenham's café or something or

Colin: or MacDonald's

Nigel: or a Burger King we're just going there and come back out

In their escapades, the children were associating formerly acquired curriculum knowledge with current information, with home and school incidents, holiday and travel, TV programmes and films, 'Knight Rider', 'Animal Hospital', 'Neighbours from Hell', Walt Disney, Elvis, books ['Goodnight Mr. Tom'] and advertisements they knew, national and world politics, computer games, Calpol, Tixilixy, Barbie dolls, interpreting, exemplifying and making analogies. Their co-operative digressions were linked with a world they knew well [Light & Perret-Clermont, 1991]. They were inserting narrative into argument to provide evidence and emphasise their points [Baynham, 1995; Berrill, 1988]. In order to impart ideas more intelligibly and "share meaning", they were employing accounts of known or jointly experienced incidents, news, stories and familiar aspects of the culture [Edwards & Mercer, 1991; Pinnell, 1984, p.250].

Using his investigation transcriptions, Phillips [1988, p.70] contends that successful talk does not keep to the point, and is not necessarily “task focused”. Digressing, as in the above extracts, is an indication of expanding propositions and thinking. “Spontaneous” diversions help interacting children empathise with one another and promote thinking [Dyson, 1994, p.205]. Children’s social interaction is indissociable from imparting knowledge [Maybin, 1990].

### ‘Social marking’

The 3B children have also referred to society’s norms of concern and fairness towards children. This led them to illustrate by recounting a currently-known story about children’s use of weapons.

#### Transcript-14

##### 3B

Cathy: they’re probably bad // the bad side of weapons are children / if they get hold of them / it can

[*simultaneous talk*]:

Unknown: =make them try them=

Unknown: =and they don’t know why=

Unknown: =commit suicide=

Cathy: yeah / cos like [*analogy*] in what happened to em / California I think / not long ago / er two boys with their guns and ran off and tried to kill all the / the school and stuff / it looks like it can happen /

[*‘therefore’ missing here*] it’s gonna get quite bad probably

Problem solving is facilitated when discourse is norm-connected: fairness, justice, moral questions with which the children are familiar, “the social marking”. In **Transcript-14**, information is tied in with the interactants’ social experience and accepted standards of the wider society with which they are acquainted [Light & Perret-Clermont, 1991, p.145; Doise et al., 1975]. Wars among nations, in **Transcript-15**, are vehemently clarified and explained in terms of conflict among friends, stressing the dire consequences that “someone

would be very hurt”, a familiar situation due to personal experience. This is an intricate comparison:

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### **Transcript-15**

#### **2A**

Peter: if there wasn't the wars / you wouldn't have invented bombs [*if* ..... *wouldn't*]

Lynn: yeah / but there wouldn't have been [ *incomplete statement, deductive markers not counted*]

Debbie: yeah so that's a lot better too / but // world disagreement can turn into really big things

Peter: when [*if*] you fall out with your friends // =you're gonna be pulled apart=

Debbie: =but= it wouldn't start a war with bombs

Peter: no heh [*laughs*]

Debbie: but it would just be more / =fights=

Lynn: =yeah you have to fight for your life=

Debbie: and someone would be very hurt / and it can go too far / whatever

Moral questions were used to illustrate points. Speaking about Norman trials, Kim deduces that “nothing was really very fair” then. The present is viewed by Daniel as a more compassionate time than Norman times: “they're more forgiving now”.

### **Peer support**

As has been demonstrated so far, using the topic question to refer to, the children were generally efficient in profuse communication with each other [sometimes including 1C and 3A]. All the children, therefore, were capable of adapting their functions as both “speaker and listener” [Lloyd, 1990, p.52] They noticed the reaction furnished by their utterances and were disposed to modify them according to the partners' responses. Their utterances were responses to one another's feedback.

But the interactions also provided evidence of peer prompting, reminding content, clarifying, correcting, finishing, “extending” and rephrasing each other’s utterances to make them more intelligible. Some corrected their own words or statements. The children also asked questions and were helped [Pinnell, 1984, p.250].

#### Transcript-16

1C

Rachel: no only at home you get a smack // but if you do something really bad and the police are involved / you normally have to go to jail

Lily: [*completing*] in the present

Jeff: yeah

Lily: unless you were in America

Rachel: or [.....]

Jeff: [*completing*] and you get killed by the electric chair

#### Transcript-17

1C

Jeff: er they chopped their heads off on what’s it called?

Rachel [*cueing*]: the guillo

Jeff: the guillotine / I think

#### Transcript-18

3A

Anna: ..... with all these new inventions being made / like [*such as*] the car and the aeroplane and the helicopter / they’re all causing gases and smoke and pollution / [*coughs*] so / more plants and animals get killed but and it’s also affecting humans as well [267]

Dell: [*expanding*] we’ve like [*for example*] people with asthma and

Carrie: [*clarifying*] in Victorian times / with their travelling / mainly they had horse and carriage / that didn’t really make pollution / cos the horses were pulling the carriage [*instead of petrol*]

Anna: [*clarifying*] but in the Victorian times the horse and carriage was sometimes wasn't fast enough  
Carrie: yeah / so they had to go along by canal

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### **Transcript-19**

#### **2A [asking and being helped]**

Lynn: erm // they had / did they have radios in the 1940s?

Peter: they had wirelesses

Debbie: they've had wirelesses during the war

Peter: yeah / they're wirelesses

### **Transcript-20**

#### **2B [replying, clarifying]**

Karen: and if you wanted to have a baby / you know / you couldn't have a Caesarean [*'if... couldn't'*]

Jenny: no / no

Lee: =what's a Caesarean?=  
Karen: =cos you'd have to push it out= / it's where we have to cut the babies so she you can get the baby out [165]

“Assertive tag” questions were utilised during vehement arguments to signal dissension, for emphasis or to convince [Phillips, 1985, p.71].

### **Transcript-21**

#### **1C [tag question to insist, mark discord]**

Lily: .....and in Tudor times [*incomprehensible*] you **had** to go to war and you have to now but

Rachel: you don't have to [*corrects*]

Lily: but you have to be a certain age // to [*in order to*] go to war

Rachel: =yeah=

Jeff: =yeah= / eighteen plus [250]

Rachel: they didn't really **have** to go to war.....

Jeff: [*insisting*] yeah but in the Spanish Armada you did / didn't you?

Repeating words, replacing better fitting ones, hesitations, relinquished words, overlapping speech to assert ideas, trying out different language modes, topic extensions – used, ceased or subsequently re-emerging – are also indications of cognitive activity [Phillips, 1988, p.81]. The talks were the children's. They were “constructing” their own “negotiable” “knowledge”.

Like Wood et al.'s [1995, p.578, 579] researched children-teachers who instructed peers to construct a pyramid, the participants here were also involved in “second order reasoning”. They were able to take account of the other learners' pace and perspectives and “contingently” elaborated and explained. Some children took charge of organising the verbal text by initiating new subjects and elaborating [Karen, Anna, Simon, Susan, Paul... ] contributing but also directing [Rogoff, 1991], thus facilitating their partners' understanding. In the following transcripts, Susan calls off a diversion and Stephen takes the lead:

#### **Transcript-22**

##### **1B**

Nigel: [169] hmm // but still now a tenner seems a lot to me / cos you got hardly get anything any more

Colin: not if you're older / if you're older / and you were trying to buy a house or something / a tenner won't be much at all

Nigel: yeah

Susan: no but

Nigel: cos ten time difference wouldn't be interesting

Colin: apart from you're trying to build your own house

Nigel: like it wouldn't cost a lot more [*comparative*]

Susan: and shouldn't we get a bit back to the subject now? [*shows responsibility*]

2C [Stephen takes lead]

.....

Agnes: except when [*unless*] the sirens came on

Stephen: and you were being bombed / do you agree Rick?

### A pleasant activity

Most of the children appeared to enjoy the activity and many laughed at their own jokes, as shown in Transcript-24.

#### Transcript-24

4B

Daniel: but the problem is with us in the world / is that there's so much pollution everywhere that / if they build up too much pollution it might [*'if ... .. might'*] break the ozone layer

// [...] it might be the pooff / and split up everywhere

Unknown: [*expanding conclusion*] and [*'then' or 'so' missing*] we're dead

Unknown: yeah

Daniel: that's probably in around seventy five billion years' time

[*laughing heard*]

Pat: I won't be around to see it

[*laughing*]

They made themselves understood through their jointly known narratives and events, past shared experiences, familiar expressions, starting off from already established knowledge to lead to the new [Rogoff, 1991]. From a Vygotskian viewpoint, "Cognitive and communicative functions" are fostered in agreeable circumstances. The children engaged in an enjoyable, co-operative social activity in which the learning was tacit, not instructed [Tharp & Gallimore, 1991, p.43].



Also, in Vygotskian terms, the children were not only tutored by the more knowledgeable peers. It was found that the participants had generally reciprocally supported and tutored one another, each with her/his own expertise [Maclure, 1994; Forman & Cazden, 1985]. As mentioned earlier, there is evidence that the more and the less proficient did provide and help remind the other interlocutors with specifically organised knowledge to write about that none would have done on his/her own. Some children have acknowledged this in their interviews without the interviewer's prompts. This is apparent in all the transcriptions. By the end of the interaction, they were assumed better equipped to tackle the written task than they were at the beginning. There is evidence of reciprocal support, discord as well as adjustments as a consequence of their utterances.

The findings also indicate that peer-tutoring and collaboration, which are two distinct learning mechanisms [op. cit.], actually overlap in this research.

We know that an argument is involved when speech supplies evidence and explanations [Phillips, 1988]. Thus, expressing opinions involves thinking. But how does speech command our mental operations to solve the problem of replying to the topic question in writing?

As mentioned in **Chapter 1**, talking is a 'dialogical' and collaborative event which is dependent, as has been demonstrated, on the other interlocutors' oral and behavioural reactions. Each turn-taking constitutes a segment of the complete text. Moreover, verbal argument is even more reliant on the partners' verbal feedback than normal conversational talk. Written argument, however, consists of a completed, extended text produced independently.

## *Written Argument*

### **Written Text evaluation**

As mentioned in the Methodology section, only the argumentative genre features were taken into account to evaluate the written texts. Lexico-grammatical characteristics, paragraphing and superficial features such as spelling, punctuation and handwriting were not considered, because the study only concerned the children's compliance with written argument properties.

### **Extent of Reasoning at micro-level**

As with the verbal discourse, the instances of reasoning employed in the written text, within the clauses, were identified according to the models and markers elucidated earlier [Chapter 2]. They were quantified in order to contrast the controls' with the experimentals' incidence of written mode reasoning. The quantifications were converted into percentages to facilitate the statistical process.

**How successfully has the oral preparation affected the argumentative written task?**

### **Findings**

In Table 6.1 the global scores awarded by the examiners indicate that the experimentals' performance in the argumentative writing task excelled the controls'. The names of the children are fictitious.

**TABLE 6.1**  
**Examiners' global scores in percentages**

**Names in order of recognised ability, selected matching pairs placed side by side.**

controls		experimentals	
SCHOOL 1			
Cara	60	Colin	95
Jessie	65	Clare	70
Iris	60	Jeff	90
Penny	75	Susan	90
Oscar	20	Lily	65
John	55	Gill	80
Tim	35	Rachel	65
Trevor	50	Nigel	65
Heather	30	Simon	55
-----			
SCHOOL 2			
Amber	70	Jenny	95
Nadine	75	Debbie	85
Ian	40	Stephen	90
Alice	30	Karen	60
Sally	50	Rick	85
Duncan	55	Agnes	85
Lucy	45	Lynn	70
Phil	80	Peter	65
Matt	30	Lee	70
-----			
SCHOOL 3			
Arnold	50	Anna	95
Betty	65	Darren	90
Dorothy	45	Jane	80
Lisa	35	Louis	60
Charles	55	Patricia	80
Georgina	40	Carrie	70
Shaun	20	Tony	55
Emma	70	Cathy	75
George	45	Dell	55
-----			
SCHOOL 4			
Judith	65	Paul	90
Dick	70	Adrian	95
June	65	Christine	55
Sandra	15	Daniel	85
Jeremy	45	Pat	75
Linda	40	Kim	80
-----			

**TABLE 6.2: Reasoning at micro-level [within the written text clauses], the controls contrasted with the experimentals. School-1.**

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**Names in order of recognised ability in each case.**

	<b>Instances of reasoning</b>	<b>Conversion into percentage taking the highest as a base 35 corresponds to 100</b>
<b>(controls)</b>		
Cara	16	45.71
Jessie	19	54.29
Iris	15	42.86
Penny	22	62.86
Oscar	20	57.14
John	12	34.29
Tim	18	51.43
Trevor	16	45.71
Heather	12	34.29
Total instances of deductive reasoning in the written text at the micro-level [within the clauses] <b>controls: 150</b>		
<b>(experimentals)</b>		
Colin	30	85.71
Clare	23	65.71
Jeff	35	100
Susan	18	51.43
Lily	15	42.86
Gill	19	54.29
Rachel	30	85.71
Nigel	20	57.14
Simon	14	40
Total instances of deductive reasoning in the written text at the micro-level [within the clauses] <b>experimentals: 204</b>		

**TABLE 6.3: Reasoning at micro-level [within the written text clauses], the controls contrasted with the experimentals. School-2.**

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**Names in order of recognised ability in each case**

---

	<b>Instances of reasoning</b>	<b>Conversion into percentage taking the highest as a base 38 corresponds to 100</b>
<b>(controls)</b>		
Amber	30	78.95
Nadine	23	60.53
Ian	27	71.05
Alice	14	36.85
Sally	16	42.11
Duncan	11	28.95
Lucy	7	18.42
Phil	20	52.63
Matt	6	15.79
Total instances of deductive reasoning in the written text at the micro-level [within the clauses] <b>controls: 153</b>		
<b>(experimentals)</b>		
Jenny	38	100
Debbie	23	60.53
Stephen	19	50
Karen	12	31.58
Rick	24	63.16
Agnes	23	60.53
Lynn	23	60.53
Peter	15	39.47
Lee	21	55.26
Total instances of deductive reasoning in the written text at the micro-level [within the clauses] <b>experimentals: 198</b>		

---

**TABLE 6.4: Reasoning at micro-level [within the written text clauses], the controls contrasted with the experimentals. School-3.**

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**Names in order of recognised ability in each case.**

Instances of reasoning		Conversion into percentage taking the highest as a base 37 corresponds to 100
<b>(controls)</b>		
Arnold	25	67.57
Betty	23	62.16
Dorothy	21	56.76
Lisa	20	54.05
Charles	9	24.32
Georgina	14	37.84
Shaun	23	62.16
Emma	21	56.76
George	21	56.76
Total instances of deductive reasoning in the written text at the micro-level [within the clauses] <b>controls: 177</b>		
<b>(experimentals)</b>		
Anna	33	89.19
Darren	24	64.86
Jane	37	100
Louis	25	67.57
Patricia	26	70.57
Carrie	26	70.27
Tony	20	54.05
Kathy	22	59.46
Dell	11	29.73
Total instances of deductive reasoning in the written text at the micro-level [within the clauses] <b>experimentals: 224</b>		

TABLE 6.5: Reasoning at micro-level [within the written text clauses],  
the controls contrasted with the experimentals. School-4.

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Names in order of recognised ability in each case.

Instances of reasoning		Conversion into percentage taking 45 as a base 45 corresponds to 100
(controls)		
Judith	24	53.33
Dick	20	44.44
June	25	55.555
Sandra	8	17.78
Jeremy	16	35.555
Linda	12	26.67

Total instances of deductive reasoning in the  
written text at the micro-level [within the clauses]  
controls: 105

(experimentals)		
Paul	61	100
Adrian	40	88.89
Christine	18	40
Daniel	21	46.67
Pat	23	51.11
Kim	20	44.44

Total instances of deductive reasoning in the  
written text at the micro-level [within the clauses]  
experimentals: 183

Tables 6.2, 6.3, 6.4 and 6.5 show that the experimentals' reasoning at micro-level within the written text have also surpassed the controls'. It will be noticed that the reasoning instances engendered by the children in School-3 were more numerous than those of Schools-1 and 2. This is probably because the School-3 children were a year older. The School-4 results are not comparable because the children were less numerous [12 instead of 18] and were observed early during the academic year. Paul's reasoning incidence was extremely high [61] compared with the next highest [40]. Therefore 45 was taken as a base to calculate the percentages. Thus 45 equalled 100%.

The t-test for independent samples was used to compare the mean percent of Composition and Micro-level reasoning.

TABLE 6.6 Results of t-test for independent samples

(Table 6.6a: Composition scores)

	n	Arithmetical Mean	Standard Error of Mean	Standard Deviation	t	p
cont.	33	50.00	3.015	17.32	6.92	0.0001
exp.	33	76.36	2.33	13.36		

(Table 6.6b: Reasoning percentages)

	n	Arithmetical Mean	Standard Error of Mean	Standard Deviation	t	p
cont.	33	46.76	2.77	15.91	3.61	0.001
exp.	33	63.04	3.57	20.50		

Levene’s Test for Equality of Variances for both Composition score and Reasoning was used to test for the condition of homogeneity of variances which is a necessary condition for the application of the t-test for independent samples. Levene’s test gave an F-value of 1.74 [p=0.192] for the Composition score and an F-value of 1.49 [p=0.227] for the Reasoning percentage. The condition of homogeneity of variances was therefore satisfied.

When the control and experimental Composition scores were compared, the t-value was found to be statistically significant [t=6.92, p=0.0001]. The experimentals’ compositions had a significantly higher mean. The difference between the control and experimental micro-level Reasoning percentage was also found to be statistically significant with a significantly higher mean [t=3.61, p=0.001].



What follows is a close analysis of the arguments written by the most able matching pair, Cara[contr] and Colin[exp] [written texts in **Appendix 6.2**]. The children argued about which historical eras they would be more fitted to live in, Tudor times or the present. Cara's composition contains 16 instances of deductive reasoning whereas Colin's has 30 [**Appendix 6.3**]. Cara's argument obtained a rating of 60%, whereas Colin's score was 95%. The examiners rated them both above 50% because they had complied with the form. In what way were they different?

The analysis is based on Wilkinson's [1986b] 3 argument criteria elucidated on page 3 to find how these two writers have attempted to adjust to each one of them.

### **Category-1: Task fulfilment**

#### ***(a) presentation of viewpoint***

Cara states her preference followed by "because" and provides reasons by contrasting both eras. Colin's claim is more intricate. First, he uses the word 'definatly' indicating he is certain of his choice. Second, he supports his initial viewpoint by making a generalisation - because the present has luxuries - and the ensuing examples in support of this main claim are developed and specific. In his discussion of transport, he does not confuse reasons with examples. His reasons serve as a sub-claim and the elaboration functions as examples.

#### ***(b) Discussing the pros and cons of both periods***

Cara's preference for one period is mainly because of what the other period fails to offer. Thus her argument is based on the negative sides of Tudor times. About advantages of the present, only 'schools' and 'supermarkets' are mentioned. In Colin's composition however, both the advantages and drawbacks of the two periods are discussed.

Cara[contr] gives some detailed evidence such as 'supermarkets' as compared with having to find one's own food in Tudor times. The example concerning 'heating' is another one. Although lacking a detailed account of hygiene nowadays, for contrasting purposes, the item about cleanliness during the Tudor times contains a sub-claim followed by examples to substantiate it : "In Tudor times the living conditions are..." Her text merely contains her disapproval of Tudor times and only few positive factors of the present. The opposing views are not stated. As mentioned earlier, she also tends to use information in terms of Tudor drawbacks.

As for Colin[exp], not only does he review both the pros and cons of the two historical eras, but each feature of one period is also contrasted with that of the other. The points substantiating his claim are presented step-by-step and developed within the same context of comparison [benefit of one period versus shortcoming of the other]. Moreover, as concerns content, both social classes, the wealthy and poor in Tudor times, are discussed. In his conclusion he goes as far as expressing his reservations about the consequences of the **luxuries** mentioned in his introduction and within the bulk of the essay, thus also showing the drawbacks of technology. On the whole, Colin's presented information is more elaborate and more specific than Cara's [Wilkinson, 1986b].

**Category 2: Logical sequence and coherence to form a purposefully connected structure**

Cara's essay forms one whole in the sense that there is a proposition which is supported and there is a conclusion. The words "also" and "but" are used, but the sections are not necessarily connected to one another. They are related to and focus on the topic [Freedman & Pringle, 1988]. The conclusion "**That is why I think life would be better in the present for me**" is relevant because it

is consistent with the information provided in the essay, but it is neither logically nor deductively achieved.

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Colin's composition is sequenced due to the **continual** pattern of comparing one item within the Tudor era and present time contexts. But some sections are also connected with the word "too", showing continuation, beginning a section with "But" to contrast with an earlier point, and "Now" to compare with Tudor times. He uses the phrase "on the whole" to bring the ideas together, and thus **synthesises**. His conclusion is therefore logically derived from recapping the previously mentioned points. Besides, he appends a summary in which he continues to analyse the pros and cons. The initial theme of preferring the present because of its luxuries recurs. The conclusion is consistent with his argument. In this manner, the theme of luxuries, "fabulous technology", binds the essay together and unifies it [Wilkinson, 1986b].

### **Category 3: Information processing and control of material**

#### **Cara[contr]**

##### ***Classifying within the sections***

Cara's composition contains three very short sections in which material is classified, such as

"I would not like to live in Tudor times because you would have to go out and forage for your food, but in the present you could just go down to the supermarket."

She has classified information [pertaining to finding food] within the same composition section. Another example is paragraph 6 about cleanliness.

However, conditions of the present are not described here. The essay contains a section with a jumbled selection of information : clothes, heating, prefers Tudor times if she were rich. One other section is unclarified ["...get killed on purpose"]. The subject matter in paragraphs 2 to 7, about disadvantages of Tudor times is factual and descriptive rather than argued, thus using "exposition" in Berrill's [1990, p.83] and Dinitz and Kiedaisch's [1990, p.87]

terminology. Cara writes the information as it is recalled and therefore copes with the 'knowledge telling' strategy [Bereiter & Scardamalia, 1987; Scardamalia & Paris, 1985].

### ***Overall structure***

There is no apparent structure to the essay and no particular order of ideas.

### **Colin[exp]**

Colin's organisation of information is at two levels. One is the classification within the sections, the other concerns the order of subject matter in the composition as a whole, thus affecting the general structure.

### ***Classifying within the sections***

Colin associates information of the same category, both positive and negative in character, side-by-side. The first is about luxuries, the second concerns entertainment, the third involves food and so on. Thus the information is classified within its related sections - with the benefits of one period and drawbacks of the other. Following is an outline of the composition:

para-1: main claim and reason: the present offers "luxuries that weren't possible in tudor times"

para-2: elaboration of reason and examples

para-3: another reason "entertainment" and examples

para-4: food now and food in Tudor times for both wealthy or other persons

para-5: comparison between life span now and Tudor times and reason

para-6: problems today and comparison of this item with Tudor times

para-7: comparison between punishment for crimes in our century and in Tudor times

para-8: comparison between beds now and Tudor times, for both wealthy and common people

para-9: conclusion with reasons and overall conditions now

### ***Overall structure***

Colin's organisation is as follows:

- Introduction -standpoint and reasons/examples [paragraph 1]
- examples: contrasted items in each of the 2 periods [other paragraphs]
- derived conclusion [last paragraph] with reasons and overall conditions now

Moreover, the concluding paragraph contains '**generalisations**' as well as '**conjectures**' about the future [Wilkinson, 1986b], thus being consistent with his initial claim and the content of his text.

### **Reasoning at micro-level:**

The reason why Cara's reasoning instances are less numerous than Colin's is due to argumentation deficiency. In paragraphs 3 to 6 Cara, as mentioned earlier, uses a descriptive style which does not require as many deductive utterances as in *argumenting*.

## **Analysis of argumentative writing features of other compositions**

**Category-1: Replying to the topic question, supporting it, considering adverse sides.**

(a) As concerns the **initial opinion presentation**, although Nigel was the only writer who thought that both periods would suit him, 8 experimentals [Colin, Clare, Gill, Jeff, Lily, Nigel, Rachel, Susan] stated their preference followed by 'because' and provided reasons by contrasting the two eras. Only 5 controls were able to do so [Cara, Penny, John, Trevor Heather]. Following are examples:

Trevor [contr]: "...because I am spoilt with with toys, clothes, food and Holidays but in the tudor times I would be really poor..."

Penny [contr]: "...because In Tudor times you were forced to marry somebody that you didn't love or prehaps you hadn't even seen.... Wheater as now you pick who you would like to spend the rest of you life with...."

Iris [contr]: "...because in the present you have wide streets with large [illegible word] but in Tudor times you were rich or poor and lived in a house of thatched building...."

Jeff [exp]: "...because there is a lot more things to do For example Television and computer games well as In the Tudor Times They only had Toys like skiping ropes etc etc."

Clare [exp] and Gill's [exp] contrasts demonstrate extended logical reasoning in presenting their premise. Clare exposes her statement by making an inference:

Clare[exp]: "...you don't have to worry about roads or cars because there was no cars to go on the roads, so there was more use of horse and carrages to get around."

Gill is also deductive beyond her use of "because". She uses the word again:

Gill[exp]: "I would quite like to live in the Tudor times *because* you don't have to worry about Tax's or bills *because* in Tudor times they didn't have cars or gas or electricity etc."

Susan [exp] presents a statement which contains the logical connector "although". Unlike the above pupils, instead of contrasting the two eras, she shows that one period has both advantages and drawbacks:

Susan[exp]: "...because in Tudor Times there isn't much entertainment although there isn't any polusion from cars and things."

Penny [contr] and Clare [exp] had begun stating their premise by speculating: "If I had the choice". Colin's premise is subtler [details mentioned earlier].

The rest of the writers – Simon [exp]; Oscar, Tim, Jessie [contrs] – use 'because' but the reasons are implicit, lacking in direct contrasts. For example:

Tim[contr]: "...because I like my house my N64 (game macher.) and TV."

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Overall, to support initial positions, the experimentals tended to employ contrast [Carrell & Connor, 1991, pp.315, 316], extend their inferences and be more specific.

(b) The experimentals' **support of viewpoints** were more detailed than the controls'. Controls Penny, Jessie, Iris and Cara's evidence contains some contrasts between the two periods [pros of one period and cons of the other only]. Jessie's[contr] contains some descriptive and personal items. The remaining **controls**' generally support their viewpoints briefly. Many controls used **descriptive** information, what Berrill [1990, p.83] would call "exposition", rather than **disputed** content.

Penny[contr], who was awarded the highest score among the controls, employs considerably detailed evidence. However, like most of the controls, it is based on what was lacking in Tudor times and she fails to think of positive items of the present. So the scant differences between the periods are in terms of advantages of the present and drawbacks of the Tudor times only. Her 'elaborated' items comprise attitude towards marriage, sports, games and clothing, both then and now. Those contrasts are in the same context as the comparison, thus side-by-side. They appear as successive comparative points related to the topic. These points are somehow linked [Freedman & Pringle, 1988] by "Some more examples is..." and "Another example is".

Penny[contr]: "Another example is the Tudors clothing because nowadays you have more fashnabell clothes then and you didnt have addidas and nike in those days you wore frilly frocks and dresses."

Nevertheless, paragraph 2, a third of Penny's text, contains **descriptive information** depicting what the Tudor times lacked [Appendix 6.2].

Tim[contr] prefers nowadays because of the drawbacks of Tudor times. The detailed points, notably health during Tudor times, are however not compared with corresponding items of the present. Some related examples are in

disconnected areas of the essay. 'Hygiene' is in paragraph 2, 'toothpaste' in paragraph 2 and 'health' at the end of paragraph 3]. What follows is a descriptive portion of Tim's text:

Tim[contr]:

"In Tudor times they made tuthpast out of honey and suger and oils and thats what makes your teeth rot the poor peopls houses are groty and you do'nt have air condishenen so it would be really could and you could die of deseses because they didn't have very good dockter."

There is one interesting point, though, which demonstrates the advantages of one period in relation to the negative sides of the other.

Tim[contr]:

"But if you were just a bit naughty they would beat you and thats a lot wers then being growndid."

Not much is written about the virtues of the present apart from electronic games, TV and a referee in football. Like most of the controls, he does not discuss the opposite sides of either period.

Oscar[contr] employs a simplified technique in giving evidence to substantiate his premise. He mainly mentions the positive points of the present time to explain how nowadays is a better place to live. Again, the **descriptive** information reporting, one sided rather than argumentative style is apparent. Reasons and examples are **listed** thus **un'developed'**. The only more or less detailed comparison is "candle light" as opposed to "electric lights".

Oscar [contr]:

"alot more people have big houses. Their are more toys around than ever. Their are much more materials to use for example metal, cotton silk, wool and plastic.

People have better transport car, bus, lorrie, vans and motorbikes. We have more stock and bigger ships for carrying food, cars, furniture, and rubbish.

We have far more tecnoligy plastation, jets, games and cd's or tapes. Instead of candle light we have eletric lights and spare bulbs. If a



fire starts we can fight it with more stuff for example fireengins blankets cars of spray water spades sand and sut.”

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The **experimentals**, on the other hand, such as Colin, Jeff and Clare, support their thesis by using **detailed evidence**. Clare[exp] **speculates** in order to argue **both opposing points**.

Clare [exp]: “If I had a letter from the King and Queen I would go and kill myself because I would’nt want to go through the pain of having an axe or an sharp saw going through my neck.”

“If I was aloud to choose who I wanted to be.....”

She provides some **elaborate examples**. In Tudor times, you

“dont have to be an important person to go in the King and Queen’s palace you can see the queen when you wish.

In the present you have to be a special person to actually visit her or him in the palace. You may not be beheaded but you have to go in prison for life where as Tudor times you go in to prison but after a while you get beheaded which stops you from being bored and in missery”

“The things I disagree about the Tudor times is the beheading and the battle on who gets togo to the throne next because it means that a lot of people get killed, and injured.”

Although content is limited to royalty, she **analyses the advantages and drawbacks** of each period.

Jeff’s[exp] composition, like Colin’s, contains **successive reasons and examples**, in a step-by-step manner to support his main claim. Items generally **compare** the two periods and the **content material is dense [Appendix 6.2]**.

Susan [exp] uses evidence with skilful **reasoning**. Whereas most children were able to deal with one or two types of information at once, Susan [exp] is able to **connect different relevant subject matter items simultaneously**. She is articulate without being superfluous. Within this context she has also been able to compare two social classes in Tudor times together with their advantages and

drawbacks. Bereiter and Scardamalia [1987] would categorise Susan's thinking process as a Level-4 [or more] as she remains consistent in her reasoning while linking numerous information elements. Following is an extract:

Susan[exp]: "...they don't wash in the Tudor Times, the beds are not very comfortable (if they have them), most people have to walk where ever they go, and if you are poor, the food that you get is limited or not very nice. Whereas, if you are in roalty you have luxurys that poor people don't have, but it is not very nice knowing that if you do the slightest thing wrong you might be beheaded!!

In the present the food is better, you can wash, their is lots more entertainment, you can get to places you want to go quicker (although it normally means more pollution),..."

Like Susan, Nigel employs several pieces of information at the same time and **binds the elements together to justify his thesis**, also demonstrating a considerable level of cognitive performance [Bereiter & Scardamalia, 1987]. To substantiate his opinion, Nigel's [exp] items are argued in detail, and examples and comparisons are **elaborate**.

Gill[exp] [peer-group A] would live in Tudor times only if certain conditions were met: if she were wealthy, if the sword were not invented and there was no execution. Thus, here she indirectly explains the shortcomings of Tudor times. She does not like the present because one worries about "bills and Taxis (taxes) and fuel". **Both sides of the question** are presented [the present and Tudor times]. Some items of comparison, though, are located in disconnected areas of the essay [cars, horses]. Gill[exp] follows up one specific theme which she treats in detail [the present is too expensive].

Rachel[exp], who was rated the same as Lily, **conjectures** in her initial premise support, then provides very **elaborate examples** to defend her proposition. However, some accounts of differences between Tudor times and the present tend to be descriptive rather than argued. Like Lily, her argument is merely

based on the positive sides of the present and the drawbacks of the Tudor times.  
The opposite viewpoints are missing.

Simon[exp], like Gill[exp] mentions expenses “electrisaticy, water, gas..” In Tudor times there were “no bills a little tax...”. Some related items are located in disconnected areas of the essay. Components such as 20<sup>th</sup> century expenses are developed whereas other items are not:

“There was less traffick no cars and horces for transport...”

Although examples are not detailed, Simon has some powerful evidence, [“no palotion, no drugs no sigrets no guns..”], and has satisfied the ‘minimal’ argument requirements [Adam, 1992], although he was originally evaluated as being the lowest in ability among experimentals. **Table 6.7** is a summary of the children’s use of evidence in their compositions.

**TABLE 6.7      School-1 Evidence to support premise**

	<i>‘elaborated’</i>	<i>partially detailed</i>	<i>use of other successful strategies</i>	<i>brief or descriptive</i>
<b>experimentals</b>	Colin, Jeff, Clare, Nigel, Rachel*, Lily*, Gill.		Susan, Simon, Nigel.	
<b>controls</b>		Penny*, Jessie*, Iris*, Cara.		Oscar, John, Tim, Trevor, Heather.

\*= contains some description or ‘knowledge-telling’

(c) By expressing the pros and cons, the children were expected to discuss, not only both sides of the preferred historical period, but also both those of the other era. Several strategies were employed.

*-Preference for one period because of what the other period fails to offer  
[positive side of one period, negative side of the other]*

**controls: 7**

Tim, Oscar, Jessie, Cara, Jessie

Iris, Penny, Trevor [presented more or less balanced opinions]

**experimentals: 2**

Rachel, Lily

*-Positive and negative sides of one period and one side of the other*

**controls: 2**

John, Heather [missing: positive side of Tudor times]

**experimentals: none**

*-positive and negative sides of preferred and other period*

**controls: none**

**experimentals: 7**

Clare, Gill

Simon, Nigel, Susan [more balanced items]

Jeff [balanced but side of nowadays is implicit in section on guns ]

Colin [extremely well balanced]

Among the 9 experimentals, 7 were able to perform the task of discussing both sides of the two periods whereas none among the controls was able to do so.

**Category-2: Logical sequence and Coherence to achieve unity.**

The experimentals have excelled the controls in achieving coherence and logically sequencing their compositions. However, the difference in the use of conclusions is minimal [Tables 6.8, 6.9].

**TABLE 6.8 School-1 Logical sequence and coherence**

<i>sequence due to connected sections of argument</i>	<i>sequence due to pattern of successively providing one point 'for' and one 'against'</i>	<i>other coherence and and sequencing strategies, makes sense because of reasoning structure or way composition flows</i>	<i>no logical sequence</i>
<b>Exps.:</b> Colin, Clare Jeff, Susan, Nigel, Rachel & to lesser extent -Gill	Colin, Jeff, Lily, Rachel, Nigel	Clare, Simon	—
<b>Contrs:</b> Iris, Penny, Trevor	Cara, Iris, Penny, John	Jessie*, Tim	Oscar, Heather

\*=solely for the way text flows

**TABLE 6.9 School-1 Conclusion features**

	<i>derived conclusion</i>	<i>relevant conclusion</i>	<i>disconnected conclusion</i>	<i>no conclusion</i>
<b>Exps:</b>	Colin, Susan, Simon	Jeff, Lily, Gill	Clare	Rachel, Nigel
<b>Contrs:</b>	Jessie, John, Tim, Penny*	Cara	Heather	Oscar, Iris, Trevor

\*=derived but not consistent with composition information

**Table 6.8** shows that there were 7 experimentals who achieved cohesion and logical sequence through the use of connecting devices [Halliday & Hasan, 1976]; 5 of these experimentals have, in addition, used other sequencing approaches depicted below. Of the controls, only 3 have been able to accomplish unity by tying in sections. Merely 2 of these [Iris, Penny] have diversified their techniques.

Some controls used “also”, “but”, “too” and “and”. Penny[contr] employed “another example”, “some more examples”. As concerns the experimentals, Jeff[exp] used ‘whereas’ [“wellas”], a contrasting “adversative” connector [Halliday & Hasan, 1976, p.242]. He used “also”, “and”, “as I said at the top of the paper” and “so” to connect arguments or sections together. But he was also able to achieve sequencing through the almost regular pattern of successive contrasts between Tudor time items and the present.

Jeff[exp]: “Tudor Toys wernet very good as I said at the Top of the paper they were like skipping ropes and hoop and stick wellas nowher days we have televishions and Game consoles and water pistols. The rich Tudors used to eat horrible Food and the poor people used to make their own Food like bread and stuFF well as we eat Pizza and chips on ocashions.”

Lily’s[exp] information is well ordered:

- initial premise: she would not like to live in tudor times
- reasons for disliking Tudor times, contrast with present
- reasons for preferring present times, contrast with Tudors
- confirms initial viewpoint previously mentioned in introduction

and her last statement, strengthens the viewpoint. She prefers to live in 20<sup>th</sup> Century “because we have teles” which she mentions earlier. The essay is sequenced because the conclusion is gradually achieved. Apart from using “also”, Clare[exp] uses another strategy. The information at the end of a section is connected to content at the beginning of the subsequent section:

Ending paragraph-2: “...[you] don’t have to be an important person to go in the King and Queen’s palace you can see the queen when you wish”

Beginning paragraph-3: “In the present you have to be a special person to actually visit her or him in the palace.”

Also, the theme of “beheading” links the third and fourth paragraphs. The reasoning through conjecture also binds the latter sections together: “if ...”. Colin achieved coherence, deduction and synthesis by using “on the whole” [Halliday & Hasan, 1976, p.243]. As demonstrated, some experimentals have varied their strategies. Two controls did not sequence content.

### **Category-3: Information processing and subject matter management.**

Several processing approaches were attempted in different proportions.

1. Very well ordered information within the sections, step-by-step pattern, within context of comparison, each set of contrasted ideas is connected with the initial premise [Freedman & Pringle, 1988].

[2 **experimentals**] Colin and to a lesser extent, Jeff

2. Subtle manner of connecting, associating different typed information [Bereiter & Scardamalia, 1987].

[2 **experimentals**] Susan and to a lesser extent Nigel

3. Some organised classified information within the sections, grouping contrasting information, but partially used step-by-step strategy.

[5 **experimentals**] Clare, Rachel, Gill, Nigel, Simon

[3 **controls**] Cara, Iris, Penny

4. Controlled **order of information** within the larger structure as well as organisation within the sections.

[1 **experimental**] Lily [but lengthened Tudor clothes description]

[1 **control**] Jessie [generally with descriptive and personal content].

5. Very little classified information.

[3 **controls**] John, Trevor, Oscar

6. Jumbled information; contrasted components in disconnected locations.

[1 **control**] Tim

7. No control of information

[1 **control**] Heather

The 9 experimentals adopted the more intricate technique in different proportions. It rather resembles Wilkinson's criterion of writing down information, in a step-by-step sequence to form a complete meaningful text, the points of which are related to the main thesis [Wilkinson, 1986b]. The experimentals, as in their interactions, tended to "single out" the related [yet in our case, non-resembling] characteristics between both historical times and were able to group them together [Vygotsky, 1986, new edn, p.135].

In **summary**, the **School-1** controls' compositions tended to be less detailed and generally contained descriptive reporting rather than argumentation. Sequencing and continuity within the text were not as accomplished as the experimentals. Content positioning was also less orderly and less controlled than the experimentals. Moreover, the text analyses confirm Cooper et al.'s report [1984, p.38 ]: there were three other factors which have distinguished the refined from the less satisfactory essays. These are firstly, the extent of "elaborations" to support premises; secondly, achievement of cohesion by contrast in addition to

the other connecting designs; finally, taking account of the opposite points of view. These characteristics were more profusely applied by the experimentals.

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Because of a lack of space, the remaining three sets of text will not be discussed as exhaustively. However, particular composition features will be depicted.

## **SCHOOL-2**

### **Category-1 stating an opinion, supporting it and discussing the pros and cons**

(a) When arguing about their preference, the 1940s or 1990s, most children's **opinions** were followed by 'because'. Jenny[exp] and Amber[contr] did so with extended reasoning. Some viewpoints were stated within the composition title – Lucy[contr], Lynn[exp]. One of Alice's[contr] viewpoints was disliking the 40s. The second half of her text begins by saying she "would like living in the 1990's". Two other children did not use 'because' – Phil[contr], Lee[exp]. Ian's[contr] and Matt's[contr] introductory statements indicated they were not argumenting, but writing a comparative essay. Ian repeats the topic question. However, he never replies to it in the composition.

Ian[contr]:

"Is the 1990's better than the 1940's? That is the question that I have been thinking about. I have been gathering up the things that I know that there is differences. I found out about the bad and the good things in the 1940's and also in 1990's. first of all I Will Start off with the bad things about the 1940's Such as the war."

Matt[contr]: "In the 1990's there are alot of differences from the 1940's one of them is Money, in the 40's not many worked and if they did work there wouldn't be that much Money."



It appears that there was incompatibility between the set assignment and the children's capability [Bereiter & Scardamalia 1987]. Ian and Matt had embarked on a comparative essay, not a written argument. Ian wrote down what he was thinking or about to write, perhaps for his own support.

(b) To comply with argument form, the children were expected to **support** their viewpoints with reasons and evidence. Amber, Sally and Phil are the only **controls** who have entirely complied with the genre. Although Nadine[contr] has also conformed, her last two paragraphs are expressive in style.

Duncan[contr] pronounces a viewpoint, but the text is both descriptive and expressive [personal]. Alice[contr] has combined the three: descriptive, expressive and argumentative. She writes about what she dislikes then shifts to what she favours about the 40s, thus producing personal or expressive writing:

Alice[contr]: "I like living in the 1940's because when I am older I can get a good job because I want to and I like to go to my school because I like doing things in my school and I like drowing and doing things and I have c.ds and a colour t.v. not like the 1940's.

The 3 remaining **controls** have not really adhered to the argumentative form [Ian, Lucy, Matt]. As mentioned earlier, Ian keeps informing his reader about what he is about to write and continues to compare the two periods. Following is another excerpt.

Ian[contr]:

"Now lets leave the 1940's and go on to the 1990's. first of all the bad things and their is a long list of them aswell as the 1940's

There was no war on so it was'nt as bad. Lets start now, there was lots of cars so that means more pollution to the towns .....

Although Lucy states her preference in the composition title, she narrates rather than arguments. She reports chronological events.

Lucy[contr]: "In the 1940's there was a war on, and many people lost their lives in the war, the people who survived was very lucky, it was quite a hard life to be a child, loads of children across England was evacuated, some children hated it and tried to run away to find the

families, other children loved it and stayed there even after the war. When the war was over millions of child became home less becose either their perents fogot about them or their perents had died.”

Finally, as mentioned above, Matt merely compares the two periods, without mentioning his opinion or concluding.

Phil[contr] has at times lacked explanations especially for the following claims: that the 40s were quieter times, and the 90s are noisier... There is another point to emphasise about Phil’s argument. It is not consistent with his introductory statement since his preference could not have merely been due to coloured TV. Thus evidence and examples are lacking.

In analysing the evidence presented to substantiate viewpoints, Ian, Lucy and Matt’s texts will not be included, since they did not fulfil the task. Several **strategies** were employed by School-2 in substantiating their personal opinions regardless of elaboration or not [Table 6.10].

1. One of them was writing down the contrasted items [or positive and adverse sides] in disconnected locations in the text, not within the same statement or paragraph. Properties pertaining to the 1940s were in one section and those corresponding to the 1990s were situated in another. Or, for example, advantages were written in an area and drawbacks in another.

2. Another manner of providing evidence was to indicate comparisons tacitly.

Rick[exp]: “Then they had never heard of computers”

It is implied that the 1990s technology was more advanced that in the 1940s.

3. Another trend was to give direct, straightforward examples of either drawbacks or advantages.

4. Finally, some children were inclined to employ direct examples within the context of a comparison, within the same statement or paragraph, thus stating the pros and cons side-by-side. The children who followed this strategy were generally more explicit and elaborate. This characteristic was more pervasive among the experimentals.

Jenny[exp]: “The food would have been different today we have alot of fried food and fast food shops then they would of grown food and made alot of food types themselves.”

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TABLE 6.10 School-2 Features of evidence [reasons/examples] to support viewpoints

extent of elaboration		strategy item [refer to numbers above]
<b>controls</b>		
Amber	considerable	mainly 4
Nadine	some	2,3,4
Alice	little detail, repetitive	1,2,3
Sally	some	2, 3,4 [item 4: 1 example, violence]
Duncan	many listed items	2,3
Phil*	some	1,3,4 [item 4: 1 example]
<b>Ian, Lucy and Matt’s texts do not apply; reasons stated earlier.</b>		
<b>experimentals</b>		
Jenny	exceptional detail	mainly 4
Debbie	considerable but some repetitive [children’s channels, animals]	1,3,4
Stephen	considerable	1,3,4
Karen	little detail	2, 3
Rick	considerable detail	1,2,3,4
Agnes	considerable detail	3,4
Lynn	considerable	2,3,4
Peter	some detail	2,3,4
Lee	some detail	2,4

*Phil\*= many of Phil’s sub-claims are lacking in explanations/evidence. The 40s are quieter and more peaceful, but no reasons or examples are provided.*

(c) Karen and Agnes among the experimentals have missed the positive side of the 40s. Otherwise, **all the experimentals** have discussed **advantages as well as drawbacks of both** times in different proportions. Despite the teacher’s instructions, only Phil among the controls has provided both positive and adverse sides of both times, however disproportionately.

Category-2 Logical sequence and coherence

Sequencing within the sections as well as linking the sections with cohesive devices, as shown in the School-1 report, contributed to the general text coherence. The successive, step-by-step, positive-versus-adverse items within

the text provided a unified pattern such as Amber’s[contr] and many experimental texts. The structure and order of ideas also determined general coherence, thus balanced arguments to produce a complete body. The experimentals, it was apparent, had again done so more competently [Table 6.11].

TABLE 6.11 School-2 Logical sequence and coherence

<i>sequence due to connected ideas or argument sections</i>	<i>sequence due to pattern of successively providing one point 'for' and one 'against'</i>	<i>other coherence and and sequencing strategies, makes sense because of reasoning structure or way composition flows</i>	<i>no logical sequence</i>
<b>Exps:</b> Debbie, Karen Agnes, Lynn*	Jenny, Rick, Lee	Jenny, Stephen and to a lesser extent: Peter	
<b>Contrs:</b> Nadine, (Ian), Sally, Duncan, Alice	Amber		(Lucy) Phil* (Matt)

TABLE 6.12 School-2 Conclusion features

<i>derived conclusion</i>	<i>relevant conclusion</i>	<i>disconnected conclusion</i>	<i>no conclusion</i>
<b>Experimentals:</b> Jenny, Debbie, Peter	Jenny, Stephen, Rick	Karen, Agnes Lee	Lynn
<b>Controls:</b> Duncan, Phil*	Amber		Nadine, (Ian), Alice, Sally, (Lucy), (Matt)

\*= comments below

Nadine[contr] connects her third and fourth paragraphs with “another reason ...”. The ideal situation would be that every section or argument be linked with the other in their ideas like a ‘chain’. However this is an uncommon attribute for inexperienced writers [Freedman & Pringle, 1988]. Lynn, from the experimental set, has shown some ability to do so.

end of para 1: “There lives were a living hell.  
beginning of para 2: But now are lives are great except the pollution ...”

Also “more freedom” briefly mentioned in Lynn’s introduction is elaborated in the last paragraph. This probably binds the text together like Colin’s[exp-School-1] idea of “luxuries”.

“now we have freedom really because we don’t have to worry about bombs dropping from the sky”

Phil’s[contr] text however, lacks coherence. After presenting his viewpoint, he announces that the 90s had “some bad things” and “some good things”. But his argument is illogical. He discusses the drawbacks of the 1990s [traffic] but the only disclosed “good thing” is coloured TV. So the argument is not consistent with his introductory statement since his preference could not have merely been due to coloured TV. Moreover because the claims preceding the conclusion – the 40s were quieter and more peaceful – are deficient in evidence, his conclusion which is derived is null and void. **[Appendix 6.2]**

An illustration of sequencing within the section is Agnes’s[exp] statement:

“...cars...and that makes more traffic and that makes pollution that damages the ozone layer”

Jenny[exp] is careful with her initial standpoint. It is indefinite — “probably”. Her reasons are at first general. Later, she considers several reasons, each in detail, both pros and cons included. She finally concludes by stating her opinion with certainty, but nevertheless continues to give other reasons why she prefers the 90s. The composition is not sequenced by linking words but by the structure. Each paragraph discusses an item/reason for her choice. There is a distinct beginning, a middle and an end which unify the composition. Her conclusion is also relevant and derived. **[Appendix 6.2]**

Stephen’s[exp] composition flows well and is clear. The presence of cohesive devices such as “so”, “too”, “even though”, “though”, has probably helped. The concluding paragraph reiterates preference for the 1990s and ends with “big thumbs up” for the commodities of the 1990s. Debbie[exp] derives her conclusion by saying that despite the disadvantages “I still like the 1990’s better”.

As mentioned in the Introduction, there are two ways of looking at information processing. One is the overall manner in which the information is organised, the outward framework or composition structure. The second is the manner in which information is assembled within the various composition sections. There were several content processing approaches within the School-2 compositions:

1. **no apparent processing**, or jumbled order of content within the parts.
2. **association of information of the same type** which I could describe as grouping together subject matter with a common link in restricted sections. Also, sometimes all the 'factual' information pertaining to the 90s would be positioned in one section and content regarding the 40s in a different section. This form of processing information showed that the children were capable of bringing together components of similar characteristics. These children would be engaging in "complex thinking" of "factual" components, not having yet attained the point of developing "potential concepts" [Vygotsky, 1986, pp.112-113, 145].
3. **successive associations, usually of contrasts**. In application of Wilkinson's criteria, as mentioned by Freedman and Pringle [1988], every successive item of discussion would be related to the main viewpoint. These written features imply that the author has been able to select points with related [yet dissimilar] characteristics among both the two relevant historical times, and were able to associate them, employing them together. For example, smaller ammunition during the 40s versus those which are extremely destructive like nuclear weapons nowadays, are used together, within the context of warfare, thus "unifying" the attributes of the 40s and 90s on a different basis than it had initially been learned [Vygotsky, 1986, new edn, p.139], hence engaging in conceptual operations:

Debbie[exp] "They only had small bombs and now our bombs can blow the earth to peices in ten seconds."

**Table 6.13** shows that the controls were less able to process content than did the experimentals. If some experimentals had written down jumbled information, apart from Karen[exp], it was in some minor locations only, whereas for the controls, it was throughout the text. The controls' simple association of items of the same type was mainly egocentric and anecdotal in character. The experimentals' writing was generally "impersonal", a trait which is emphasised by Martin [1989, 2<sup>nd</sup> edn, p.44].

**TABLE 6.13 School-2 Subject matter processing strategies**

1. no apparent processing or jumbled order within the sections	2. association of information of same type	3. classifying related information of different type
<b>experimentals</b>		Jenny [mainly]
Debbie[para 4 small portion]	Debbie [partially]	Debbie [partially]
Peter [partially]	Stephen [partially]	Stephen [partially]
Lynn [small portion/para 1]	Peter [partially]	
Karen [mainly]	Karen [para 3]	Lynn [mainly]
		Rick [mainly]
	Agnes[some/para 6]	Agnes [large proportion]
<b>controls</b>		Amber [mainly]
Alice [mainly]	Alice [some egocentric non-conforming content]	
	Nadine [egocentric, expressive paras 5, 6]	Nadine [partially]
Sally [mainly]		Sally [1 example]
Duncan [mainly]	Duncan [relevant as well as egocentric content, some listed, some descriptive]	
		Phil [traffic, play, TV]
(Matt) [non-conforming]	(Ian) [non-conforming]	
(Lucy) [chronological, non-conforming information]		

As for organisation of outer structure, **5 experimental texts** had an organised arrangement [Jenny, Debbie, Stephen, Rick and Lee] as compared with **2 control compositions** [Alice, Duncan].

Here is an example of Duncan's[contr] processing strategy which is mainly **classifying** information of the same type within a well outwardly structured text consisting of 3 sections. One section discusses what "the 90s don't have". Another is an egocentric, expressive account of what Duncan enjoys doing. The third is something like an undetailed list describing the 90's drawbacks.

1. what the 90s don't have
  2. what Duncan likes to do in the 90s
  3. "bad things about the 90s" [listing]
- concluding statement "I like the 90s better"

3<sup>rd</sup> section:

"There are also bad things about the 90s there is more pollution and more violence, and violation of the law. People don't help each other out There is more fattening food like junk and fast food but some of it's nice. There is also pollution from the landfills..."

The list of items, however, is in jumbled order and pollution is mentioned twice, like speech or "unplanned" text [Ochs, 1983, p.149]. Duncan[contr] is essentially 'telling' content rather than arguing. Yet this approach has helped him conform to the form [Bereiter & Scardamalia, 1987].

**Agnes[exp]**, with whom **Duncan[contr]** constitutes a matching pair, also uses associated information of the same type in her last paragraph. She writes about the aspects of "air raid tunnels". This occurs after contrasting the music styles of the 40s and 90s.

"They had music like Glen Miller in the mood. They would, play that in the air raid tunnel's, to make people happy they would serve cups of tea, in the air raid tunnels. They had beds in there and benches they, would take turns and there were toilets there..."

Like Duncan, she recounts knowledge in the same order as it is recalled. However, it is more specific. Duncan writes about general attributes of the 90s whereas Agnes writes about the tunnels. Whereas Agnes's information is orderly, Duncan's is not. Moreover, Agnes's composition is about twice as long.



It consists of a series of paragraphs, each with classified connected information, most of which also contain contrasts [**complete texts: Appendix 6.2**].

para 1: viewpoint +2 supporting reasons [“more entertainment”, “more jobs”]

para 2: 1940s’ rationing compared with 90s’ luxuries- chocolate, meat, bread, butter para 3: 90s more cars, effects on traffic pollution, ozone layer

para 4: 40s racism, Agnes’s opinion

para 5: 40s games they did not have, games they have [thus some sort of comparison]

para 6: [longest para] comparing TV, computers and music [40s and 90s], describing music played in 40s, describing shelters, “air raid tunnels”

Concluding statement: “I think the nineties are best.”

Agnes’s[exp] writing therefore demonstrates more expert writing than her counterpart’s.

My analysis of Alice’s and Phil’s texts [controls] conflicts with the assessors’ scores. In my opinion, Alice’s[contr] composition was rated too low and Phil’s[contr] too high. I also think that Karen’s[exp] was over-rated.

### **SCHOOL-3**

To fulfil the School-3 task, it would be required to argue which times had caused less disasters [human and environmental] due to industrialism, give evidence and take account of the opposite viewpoint. The class had already been involved in comparing the two periods in their history lessons. It is for this reason that the less complicated topic question type designed for the other 3 schools would not have been challenging for these high attaining Year 6 pupils.

It will be shown which pupils fulfilled the task or not. It will also be discussed how content relevance can affect the tackling of the argument [Wilkinson, 1986b].

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### **Controls:**

There were 5 controls who did not state their premise [Arnold, Dorothy, Charles, Georgina, Shaun] and most of these mainly wrote comparative essays. Charles's[contr] text contains very relevant points, however one section describes one era and the other our times. Arnold's[contr] text, analysed in detail below, contains incongruent argumentation. Dorothy's[contr] composition is a comparative one until she states her conclusion. Not much is written about disasters, apart from 'pollution from factories' in Victorian times. Dorothy is unable to link present "oil spills" affecting "fish" and "birds" to industrialism. She states her opinion only during the last 4 lines giving 4 reasons, only two of which are connected, however implicitly, to industrialism: "I don't have to work so young" and "cars".

Although Lisa[contr] states her premise at the start, her text does not discuss environmental disasters due to industrialism. Georgina[contr] mentions her opinion only in her conclusion. Although she mentions pollution, her comparisons are repetitive and are considered in terms of working conditions and wages but do not deal with 'disasters'. There is thus insufficient evidence which might be related to the topic question. Shaun[contr] states no standpoint, not even at the end. He begins with appropriate details about disasters, but the text as a whole is a comparative essay [Appendix 6.2].

Emma's[contr] evidence, because topic-associated, contributes to substantiating her standpoint. Although repeated at times, evidence does include effects of factories and machines ['industrialism'] on human and environmental dangers, "pollution", "sewage", "litter" both in Victorian and more recent times. The portion about contemporary issues consists of some descriptive elements, but

the text does achieve a sense of coherence due to the structure and content inclusions within this framework.

para 1: prefers 20<sup>th</sup> century because of disastrous sides of Vic period & examples

para 2: positive side of Vic, similarity with 20<sup>th</sup> century [unclear]

para 3: mainly accounts about 20<sup>th</sup> century, concluding statements, reasons

Emma has various ways of displaying evidence. She compares, but contrasted items are in disconnected areas. She also utilises implied, indirect evidence [prefers modern times because of negative side of Victorian period] and straightforward 'telling' [**Appendix 6.2**].

Betty[contr] also complies with the form in the sense that she provides reasons to support her viewpoint. She mentions diseases during Victorian times and working conditions with machines. However, "oil spills" are considered a current disadvantage, not a disaster. Betty's information is generally not topic-relevant. It is not about industrialism and which era produced less damaging disasters. George's[contr] is partially argumentative. But he tends to write in terms of advantages, drawbacks and personal matters, not about human and environmental disasters.

Thus although Emma and somehow Betty and George do adhere to the argumentative form, only Emma uses pertinent subject matter. The School-3 controls were either inclined to write comparisons or tended to employ unrelated information.

### **Experimentals:**

By contrast, all the experimentals, except Dell, have stated their viewpoints and used appropriate evidence to substantiate opinions. Therefore 8 out of 9 have fulfilled the task by replying to the topic question in different ways. They tended

to use topic-relevant information, about industry and its effects on humans and the environment.

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For example, Darren[exp] keeps to the point by discussing incurable ‘illnesses’ and their causes [factory working conditions, undeveloped medicine], thus in a way defining ‘human’ disaster, and then he synthesises:

“That was a human disaster.”

This is followed by writing about the “sewage ... flowed into rivers” and its effects. On this occasion he synthesises again:

“So that was a human and environmental disaster in one”

He writes about positive sides of each period as well as its “downside”.

Victorian and modern times are then contrasted. In so doing, his task is facilitated to gradually deduce that more recent times are less disastrous.

“Luckily the environment is doing well because of the green belt which protects the land...”

Therefore there are “...not so many disasters” in modern times. These are finally again compared with Victorian conditions. From the above examples, it follows that Darren presented his material sequentially, leading to task fulfilment and coherence thus unifying his viewpoint with instantiating evidence while taking account of the opposite stances at every move. So continuity was achieved not only through statements “that was a human disaster” and “but nowadays...” etc., but also by the structure, the step-by-step explanations and the derived concluding statement. Following is the structure within which information was classified.

- premise and support
- examples of human disaster and synopsis [including contrast with other period]
- examples of human and environmental disasters and synopsis
- industry in Vic. times [both positive points and “downside”]
- industry in 20<sup>th</sup> century [positive points and “downside”]
- differences between environment today and during Vic. period
- concluding statement

It is visible that Darren had clearly explained what disasters were as he replied to the topic question.

Jane's[exp] text replies to the topic question through step-by-step explanations, contrasting the extent of Victorian and more recent industrial disasters.

Moreover, in the middle of her composition, Jane reminds her stance despite admitting the occurrences of disasters during modern times. She thus openly considers the adverse side.

“Even though I made that statement, I still agree that living in the 20<sup>th</sup> century is better.”

She does so, in order to show how modern times are **less disastrous** in the subsequent contrasts. This directs her towards her conclusion, thus tying the composition ideas together. She ends her composition with:

“20th Century is much better for me. I will not change my statement.”

Jane is also able to generalise:

“It seems like everything leads to death”

Jane's and Darren's recalled information is audience-aimed [Flower, 1979] and is therefore based on the task 'goal' [op. cit., Wilkinson, 1986b; Bereiter & Scardamalia, 1987] [**Appendix 6.2**].

Patricia[exp] thinks modern times produced “less disasters than the victorian age...” thus she precisely replies to the topic question following the steps in which it is formulated. Although she misses positive sides of the Victorian era, she compares industrial disasters then to those nowadays, together with present advantages to conclude that nowadays “...people are more careful...there are laws...and factories are now safer...”

Both Louis[exp] and Tony[exp] were also able to tackle the form due to relevant content. They looked at both effects of industrialism: they are both **damaging** and **helpful** to the environment.

Tony[exp]:

“...we have made two main things. One to help and one to destroy...”

Louis[exp]:

“...then there’s the benifits of factorys, like they make furniture and other materials that we need”

The generalisation is followed by explanations.

Cathy[exp] employs appropriate content within a well structured framework, however using unnecessary headings [**Appendix 6.2**]:

- statement of viewpoint
- 20<sup>th</sup> century [human & environmental disasters]
- Vic. period [human & environmental disasters]
- conclusion

Although Carrie’s[exp] points are not as developed or as relevant as other experimentals, subject matter is presented in a well controlled order.

- viewpoint and reasons
- environmental problems
  - Vic. period [negative sides]
  - 20<sup>th</sup> century [negative and positive sides]
- human disasters
  - Vic. times
  - 20<sup>th</sup> century
- conclusion

Dell[exp], the originally least competent target writer is the only experimental who has not stated a premise at the onset. His composition is also less detailed. However, he employs some relevant content material to achieve a consistent conclusion. Among other items, he discusses factories and their effects on pollution and stench. He discusses the impact of construction on the “fields” now and children working in factories during Victorian times.

To conclude the School-3 text-analysis, a comparison between the most able matching pair’s writing features when attempting to achieve the task follows.

Whereas Anna's[exp] global score was 95%, Arnold[contr], the pupil matching her in ability, was awarded 50%. Anna produced 33 instances of reasoning within the clauses. Arnold used 25.

In her opening paragraph, Anna states her standpoint and supports it by providing evidence. She states that the Victorian period produced more human disasters, that the 20<sup>th</sup> century has more environmental disasters and provides evidence for both viewpoints. Arnold does not state an opinion until his concluding statement. Thus Arnold does not adequately adhere to the form.

In paragraphs 2 to 4, Anna expands her introductory generalisations and comments on both advantages and drawbacks of each of the two periods, by giving examples. She provides developed evidence for her statements, both negative and positive:

Anna[exp]:

“The advantages of living in the Victorian times is that there were less environmental disasters because there were less factories and so less gases, smoke and pollution was let out.”

Both ‘human’ and ‘environmental’ ‘disasters’ are mentioned, thus keeping in line with the topic question requirements.

Arnold[contr] does not distinguish between “human” and “environmental” effects. Instead, Paragraphs 1 to 5 are descriptive or factual, recounting the various general disadvantages of Victorian times, as though replying to a History question, by writing down what he knows [Bereiter & Scardamalia, 1987]. This form of depiction persists past half the text, until he mentions “trains” which “caused pollution”. In the second portion, Arnold writes about the more recent times. On two occasions, he claims that they are also “quite dangerous”. In what manner are these times ‘dangerous’ or why is not explained. Instead, he mentions improvement in housing and working conditions and that we “don’t have pollution running through the streets”. This is not consistent with his line of thought because towards the end, pollution caused by

“cars on the road” is elucidated, which contradicts what he has previously written. Thus, although Arnold has some ideas to insert, he is not capable of clarifying or organising them in such a way as to dispute a viewpoint. He has found it difficult to cope with both form and content exigencies simultaneously [Flower, 1979]. His writing reflects concern about producing text rather than adapting to form [Scardamalia & Paris, 1985].

Anna has been able to analyse both positive and negative points of both times in terms of industrial disasters, as she had verbally articulated them during the interactions which can be considered a draft [Vygotsky, 1986, new edn].

Arnold, however, has not presented any Victorian period advantages, confirming other studies contending that children find it difficult to consider stances which are opposite to their own viewpoints [Wilkinson et al, 1980; Roussey et al., 1999].

In arguing which times she thought had caused less human and environmental disasters, Anna’s orderly constructed composition can be outlined as follows:

para-1: standpoint

- Vic. period more human disasters than 20<sup>th</sup> century, 20<sup>th</sup> century more environmental disasters + reasons/examples of both

para-2:

- advantages of 20<sup>th</sup> century + examples
- disadvantages of 20<sup>th</sup> C + examples

para-3:

- advantages of Vic. period + examples
- disadvantages of Vic. period + examples

para-4:

- children not working in western world compared with others in other places; difference between pollution now and before [positive and negative points of 20<sup>th</sup> century]
- concluding section: she would rather live in 20<sup>th</sup> century + reasons/examples



As demonstrated, the experimentals so far were better able to give explanations and synthesise, thus analyse. They were able to “unite” and “separate”, thus engage in advanced conceptual skills. They were more efficient in generalising thus were able to “abstract”. By abstracting, they were also able to “single out” shared characteristics within a range of items. They also tended to apply these generalisations drawn from their History lessons, in a different organisation than their original classification when first appropriated: they had become skilful in positioning related, yet contrasting information, side-by-side by employing written language [Vygotsky, 1986, new edn, p.135]. These abilities demonstrate that the experimentals were involved in more advanced cognitive functions than the controls. The controls tended to write historical facts the way they had learned them and to replicate an earlier comparative task.

The controls in the present study were analogous to Berrill’s [1990, p.88] investigated 16-year-olds’ written arguments. They lacked elaboration and evidence to support premises and ability to “classify” or categorise. Like Vygotsky, Berrill is convinced that classifying involves “identifying relationships” instead of categorising according to characteristics. The experimentals were more cognitively prepared for such organisation of information. Moreover, Berrill would describe the experimentals in the present study as being more “socio-cognitively” developed than the controls because they tended to be aware of the two contrasting viewpoints, not only their own.

## **SCHOOL-4**

The outright distinction between the School-4 controls and experimentals is the density of information employed within their texts and its organisation, both in classifying the information within the sections and in the general orderly composition structure. Thus, as Ferris [1994] states, compliance with argumentative form and text length are related. The children here were to argue whether they preferred Norman times or the present.

Judith[contr] is an able and mature writer. After stating her preference, Norman times, positive and negative sides of the present are implied and indirectly stated if you look at them from the Norman point of view.

paragraph-1: standpoint and reasons

“...there would be no pollution from cars..... There would be more trees and wildlife because they would have more space... no M25’s...”

paragraph-2: negative and positive points

“...not many doctors..... you would have to travel for hours just to buy sugar or honey. But you could grow your own organic produce...”

paragraph-3: privileged social classes versus drawbacks of being a serf

However, Judith’s next section, paragraph-4, ‘tells’ descriptive information about the plight of slaves in Norman times. In her concluding section, therefore, she is obliged to change stance:

“...it would be nice to have certain things from each time.”

In reality, to defend her viewpoint, she has used a much smaller variety of information than Paul, her experimental counterpart. She has also employed lengthened unnecessary factual information about slavery, and her conclusion is not consistent with her initial viewpoint. Although her composition flows well when read, and some subject matter is successfully associated within the sections, the general order of ideas is jumbled and unplanned. The explanations however support the thesis although they are not all sequenced [only paras 1 and 2 really connect with “as well”]. If one considers the conclusion, the composition is not really coherent. Also, direct positive points about the present are missing.

Paul, by contrast, uses exceptionally detailed information within extended text. The lengthier the text the more probable it is that the writer has elaborately substantiated the premise [Ferris, 1994]. **Every** sub-claim is supported by reasons and evidence, thus his analyses not only abound, but are also ‘elaborated’.

“The government has better ways of punishing because if you do something wrong they fine you or they put you in prison and after a while you stop doing bad things and they give you another chance, but in Norman times they would cut off the arm you stole with or they killed you.”

Moreover, Paul's text is well structured. Following is the composition outline:

A. Stating viewpoint and general reason why

B. Bulk of information divided into two:

1. *How present times can be better than Norman times*

- comparing medicine nowadays/Norman times.
- dangers of Norman times: illnesses [humans, animals]
- more knowledge, more education now [personal example]
- comparing punishment Norman times/nowadays

2. *How present times can be worse than Norman times*

- advantage of harsh punishment in Norman times
- advantages of Norman times over present times, theme of landscape [information regarding present time is tacit]: in Norman times there were less people, more trees, less pollution, larger rainforests
- pros and cons of wars nowadays [more weapons, nuclear wars-disadvantage, however Nato can “stop” a war]
- drugs - disadvantages of present

C. Brief conclusion [consistent with initial premise].

Compared with Judith[contr], Paul has a wealth of information to impart and he is in control of what he writes. He has two main ways of presenting his evidence, by using matching information within each section and by employing pros and cons side-by-side. Thus subject matter is also well classified. He analyses adequately, but also speculates:

“If I went to Norman times and I told people everything I know I would be considered a genius.”

Adrian[exp] uses less profuse content than Paul but was rated higher perhaps because the text was more concise. Adrian's text, has an orderly structure. He uses the following outer framework organisation.

He prefers "to live the present time because ....."

-hospitals

-technology

-houses

-education

-drugs

final statement:

"But after all I would prefer even with its down points I would like to live in the present"

Each of the above items is discussed in detail to show **advantages** and **drawbacks** in each era, explaining why and providing **examples**, thus information is also well classified within each section. Adrian[exp] also hypothesises to elaborate and explain:

"I think that also the houses are much better now than they ever have been, they are much warmer because of central heating and they more heather because if you have a fire in a modern house you have a chimney. If you have a fire in a Norman house there was only a hole in the roof, this meant that smoke could move round the house and if you inhaled to much smoke you could die!"

Kim, who was a Group-A participant with Paul and Adrian and who was originally considered the least able experimental, has also handled her content aptly, classifying it within an appropriate 'hierarchical' construction.

-States standpoint "present is better" and why...

-health care

-ways of living [education, houses, food [but scant examples here]

-weapons

-safety

[concluding statement within section on safety]

The overall structure is therefore orderly, contrasting the way each of these items would be in each of the two historical eras.

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Those pupils who constituted Group-B, led by Daniel during their interaction, had a problem. As stated in the peer discourse analysis, Daniel was very convincing in his explanations when considering both historical periods equal in their number of advantages and drawbacks. This is reflected in the written texts.

“I think they are both as good as each other they both have the same amount of good things and bad things”

Following is the composition framework:

para-1

Stating standpoint

\*\*\*the Normans

advantages

disadvantages

para-2

\*\*\*the present

drawbacks

advantages

No conclusion

The composition is logically sequenced due to the orderly structure announced at the outset. There is a regular pattern of advantages and drawbacks of each period which are analysed in great detail. Some items are explained in the context of a comparison, some not. The text is clear and makes sense and the content is purposeful. He uses both direct and implied examples. It is a pity, though, that there is no conclusion. Here is how he writes about a Norman time advantage, showing how he relates this state to present times.

“The water is a lot cleaner because people could wash their clothes in it, and no sewage got into the water compared to the Thames.” [now]

Christine[exp], influenced by the verbal interaction, does not have a clear-cut position at first.

“There are good things and bad things about both present and Norman times.”

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However, a definite opinion is materialised as she derives her conclusion:

“I would prefer to live in the present because of all the advantages...”

Her organisation is less defined than Daniel’s. Nevertheless, it is a step-by-step construction of mainly Norman time drawbacks coupled with an advantage of the present. Using this pattern, she discusses several items before achieving her conclusion:

- advantage of electricity + examples/evidence versus drawback of candles
- disadvantage of pollution now versus advantage of Norman countryside
- drawback of unfair treatment of Norman times, evidence/examples
- relevant peace in Norman times versus nuclear weapons now

Pat[exp], too, does not have a definite initial premise except “In the present we have more advantages...”. However, like all the other experimentals, her text is characterised by the explanation detail and the design of a distinct outer composition structure within which information items are associated and classified. Each explanation generally contains both positive and negative facets.

1. So-called standpoint
2. Body:
  - electricity, clean water, medical service
  - food
  - pollution
  - transport
  - litter, logging of rain forest
  - crime, vandalism
  - law and order
  - trials/prison sentences

3. Conclusion and explanation: “I think the present is better because we have more advantages but the pollution is getting higher the greenland is gettin smaller every minute.”

Returning to the **controls**, only June and Dick were found to process their material within some form of larger framework. However, June’s composition has 2 intermittences of content-recounting or “exposition” as she informs about Norman indictment and schooling [Berrill, 1990, p.83]. Moreover, there is no concluding statement. Therefore, apart from Dick to a certain extent, none of the other controls has been able to tackle the co-ordination of subject matter. Dick uses simple, straightforward evidence as well as contrasting examples. Although his text contains some listing and each item lacks in-depth analysis, there is nevertheless a great deal of information in this short composition.

Both Sandra[contr] and Jeremy[contr] misunderstand their teacher’s instructions on having to mention what to write about. Sandra thus fills in two of her 14 hand-written lines with the following:

“I am writing an essay about what time I think would be best to live in Norman times or present”

Jeremy also writes:

“I am doing a essay to say if I would like to live in normans or modern times.”

Sandra only discusses social structure and health. She uses half of her composition in straightforward factual information or “exposition” about the social structure item [op. cit].

Jeremy[contr] is slightly more elaborate. His text is sequenced due to the recurring pattern of placing negative and positive points near the other. However the content is not all coherent. Linda[contr] states her viewpoint unusually: “I have more of a choice of a modern day rather than a olden day choice”. Her text mainly consists of a descriptive account of the social system of the time. She begins to show the positive sides of the present system when she

depicts Norman trials. Apart from this item she merely adds present medical research and ends there. Her composition is therefore not purposeful.

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Thus, excepting Christine[exp], all the experimental texts are abundantly detailed. As demonstrated, the School-4 experimental compositions [**Appendix 6.2**], with the possible exception of Christine's, are distinguished by the elaborate support of their viewpoints. They are all characterised by orderly classification of information [Wilkinson, 1986b]. Merely one control text, Dick's, might have similar attributes.

In summary, the text-analysis pertaining to the writers in the 4 researched schools shows that the experimental pupils adapted to argument genre constraints better than the controls in every one of the ways elucidated by Wilkinson [1986b]. Moreover, they used strategies which were more cognitively developed. They were also able to surpass the controls in their use of deductive reasoning at clause-level.



## *Respondent Verification*

Supplementary data were amassed by interviewing both control and target children when the composition was completed. This was to augment the likelihood of exactitude in the research results and to verify the findings' authenticity and objectivity.

- The experimentals were asked how it was **different** to plan the writing in small groups as they had done.
- Both controls and experimentals were requested to tell what they found **easy** and **difficult** in performing their written task.
- The controls and only some experimentals were asked whether they would **suggest a way to facilitate** writing argumentatively.

### **HOW 'DIFFERENT' IT WAS TO PLAN WRITING IN SMALL GROUPS**

#### **Positive aspects**

All experimentals, except Cathy, expressed positive aspects of the interactions. Dell, who was first uncertain, admitted that in his writing he had made use of his partners' ideas as well. Recurring experimentals' comments were that the interactions made it "easier" because "you talk it through", it was "better", "it makes it more fun", "helpful", gave "a lot", "better", "different" or "more ideas". Lynn obtained different ideas "through" and "from" her partners. Daniel claims, "you can get more done" and "you don't need to put your hand up". Lee confirms the claim by adding "when it's three of you / it's just wait until one is finished and then you can just start talking". "It's like a conversation / you can just talk and talk" remarks Christine. Small groups are "better", claims Adrian,

because “you get to talk to each other... and you can listen to each other” which is “quite hard” when you are more numerous. Paul remarks that “you feel... more relaxed” in small groups “and if you’re in a classroom with more people you feel a bit panicky cos you think oh my gosh lots and lots of people are here”. Susan in classroom situations is “afraid” she “might get it wrong” and Kim confirms that “you don’t get scared too much” in small groups.

The children felt they were giving independent viewpoints. Rick mentions “working together and sitting on our own” and Colin stresses giving “our own opinion”. Jeff asserts that “you get to... saying what I want rather than... just write a few lines.” Lily claims “you can say what you think”. “You got to talk about it and say your ideas,” Debbie states. Karen, Susan, Lee and others could also “get” their “saying”.

### **The interactions facilitated thinking and remembering**

According to Susan they helped her “think about what” she “was going to write”. Stephen admits “you have to think... it’s not all there on the piece of paper” and Debbie describes the experienced process: “When you’ve finished you could’ve remembered it and you could feel like a big chunk out of it that you wanted to come up... we all discussed it together and just write it down on your own.”

Awareness that they were sharing ideas and contributing to one another’s learning was expressed.

Peter: it’s like going other people’s ideas and it’s not just your own

Clare: they have points that you haven’t

Nigel claimed he “enjoyed working with them both... they kind of boosted me on”. Colin was conscious of involved mutual support “so... all of us gave a bit”.

This is confirmed by Jenny:

Jenny: we could all give each other ideas and help each other out

Adrian, Jane and Louis directly mention “sharing ideas” and Paul emphasises you can “share and enjoy” them. Louis explains: “get more...give more” and “gain more ideas”. Tony clarifies, “get better ideas from them **and** yourself.”

However, Tony also says:

Tony: sometimes it's better if you've got some intelligent person in a group who is better...clever

The interviews have also corroborated that the children were building upon others' ideas. Lily speaks of comparing “the difference together then sort of make it into one thick one” and Jeff and Simon remark the following:

Jeff: what they said would bring out something new which you probably couldn't sort out on your own

Simon: we all get to disagree and agree on things / and then / we come to a final verdict on what we think is better

Carrie elucidates that they “just chose” the “best” ideas and Patricia stresses that while working together one could decide on “which is the best bit” and “which is the worst but ...on your own” you could not. Anna and Paul suggest what peer-group members can do:

Anna: you can sort of combine them [ideas] together so you can come up with one thing

Paul: you can adjust them to what you want them to be

Thus both **social constructivist** learning perspectives are confirmed to have been involved in the children's interactions. The talks appeared to have been an easy and enjoyable activity as opposed to the constrained classroom conditions. the interactions had engendered thinking and allowed the children to contribute and share one another's ideas. Moreover, the children were using one another's thoughts and ideas in order to build their own.

## HOW 'EASY' AND HOW 'DIFFICULT' THE WRITING ACTIVITY WAS FOUND

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### Experimentals

As expected, all experimentals [except Nigel] found the writing easy in various ways. Readiness in remembering subject matter appears to have been a crucial facilitator:

Simon: you know what you're going to write and say

Susan: I remembered a lot more things that...helped me think what I was gonna write

Clare: some other people told you things you hadn't known and that you could've included

Rick: we had the ideas from our head

Lee: ...cos I know a lot about it after talking with the friends

Tony: the easy part was just / writing it down cos you know it / and you remember it well

Cathy: cos I knew how to get it [information] out / and then most of it I knew what to write

Anna: it comes just straight to the top of your head / so it's all like fresh

Jane: ...just getting your pen out and writing down

Kim: you didn't have to think about them [ideas while writing] because you already did it once / so it was a bit easy that way

Daniel: ...we literally wrote through it straight away... I had all the ideas... we recite and write it out straight away

For Patricia "we can understand it...because you discussed it before"

Adrian and Paul [School-4], who were group-interviewed, elucidated organising their compositions to consider the "person who's reading". Adrian claimed they had collected "loads of ideas" from the interactions, "but you wouldn't write it like that" it would be "just good" "if you stuck like five ideas like technology,

hospitals, warfare and other things like that and write examples” and Paul completes:

Paul: you can write a lot of notes for five ideas ... because if you say you want to write twenty things then you couldn’t really write them as well as if you say you wanted to write [about] five things / so you can only write small things and say oh gosh I’ve got nineteen more to go.

Apart from Simon and Nigel, if there were any difficulties for the experimentals, these were obvious and **specific**. Difficulties were expressed in terms of what they had done rather than what they were unable to do. For Colin, “it took longer than a story”. Gill “had to put more detail in to make it make sense”. Debbie later remembered a sentence which she “squashed” in “somewhere”. Agnes found it hard to insert commas. Tony could not use all the information he had in mind. Louis points out questions of organisation, “it was hard just to write it in the right way”. Cathy, Dell, Carrie, Peter and Karen found it harder to write about the past as opposed to the present. Patricia tried not to “stray off” the question. Christine only found it “hard to start” and Lynn thought she had “missed” but then “added stuff”.

## Controls

The controls’ difficulties were **general** and mainly attributed to recalling and writing information, although some claimed certain aspects of the writing were easier than others. Some appeared to have “loads of ideas” and like Alice and Phil, found it easy “at first” but later had problems or like Penny, “ran out” of ideas. Heather “got stuck”. For John, Penny, Jessie, Cara and Tim, Simon and Chris, it was hard “to remember stuff” especially about the past. For Lucy thinking of ideas was easy but not writing them down. For Ian only the middle was easy. He did not “know what to begin with or end with”. It was the same for Iris:

Iris: you didn’t really exactly know how to start or how to finish / it was just pretty hard”

Nadine found it difficult to express her opinion and was unsure about content material. Chris and Matt found it “difficult to remember certain things”. Sally was thinking about what to write and Lucy found it hard “putting” ideas “into words”. Georgina “didn’t have a clue what” she “was going to write”. She was helped by Dorothy who, like Emma found it hard to begin. Lisa and Betty did not “understand the question”. For Linda it was “hard” because she did not “like essays”. For Jenny and Jeremy it was because the “subject” was hard. Although Judith later found the composition easy, she had also had recalling problems “so I was sort of thinking to write that one down before you forget about the second”. This confirms the coping information recounting process of writing down content in the same order as it is remembered and worrying about what to write ‘next’ [Bereiter & Scardamalia, 1987; Scardamalia & Paris, 1985].

John and Trevor in School-1 claimed that the complete topic question helped because it had “all the instructions”. It must be remembered that only the School-1 children were presented with the detailed topic question when writing. Both Linda and Sandra claimed they did not finish their compositions. Sandra “blanked out” and Linda’s knees trembled. The teacher had said they were going to write an essay and this reminded the children of exams.

### **Revealing classroom conditions**

From these interviews it was learned about class writing habits and conditions.

Sandra: I get an idea and then I get a couple of more ideas / and then... my arm begins to hurt and then I suddenly get bored everything starts to lose out of me and I don’t get concentration and then I just lose interest in it

Judith: sometimes I just sit around stare out the window...

Nigel[exp-School-1], Ian[contr-School-2] and Daniel[exp-School-4] indicated that they were taught that a composition had three phases, “beginning”, “the main” and “the conclusion”. The children usually wrote a plan on a piece of

paper or “jotter” before the actual writing. Anna[exp] indicates a plan’s drawback:

Anna: on a plan you’d have to keep on looking at it

Some children like in School-1, were normally “given a list of words that you’re able to choose from”. They mainly wrote narratives and in School-2’s case, they were sometimes helped by the person who shared their desks. In the classroom “you don’t have a chance to say what you think”.

## **HOW ARGUMENTS COULD BE TAUGHT OR FACILITATED**

Suggestions were provided by the controls as to how written arguments could be facilitated. Penny proposed having oral arguments. Others recommended headings or pictures and writing underneath, starting off by a simple topic, being “told more about it beforehand”, using a sharp pencil, more space, a more exciting subject, longer writing time, talking more about it in class, leaving the teacher’s notes on the board, working collaboratively, writing a rough copy first, planning on paper and keeping the notes beside them. A genre-based approach was also suggested: Jeremy wished an “example” or model to be shown, “what somebody else had done before”. Arnold thought it “should be taught in parts so that they can get to understand it better... just little bits at a time.”

Some experimentals were also requested to give their views. Using a tape, “recording” and “listening” to it were suggested. Discussing with the teacher and using a computer were other thoughts. Darren thought of preparing it “as a speech” and Cathy proposed “reading”. Whether it was reading a model sample or reading about arguments was unclear.

Overall, the children’s responses have confirmed that the peer interactions were enjoyable, useful and had facilitated the written task due to the participants’ mutual contributions, thinking and remembering. They corroborated the restrained and non-innovative classroom writing conditions. The interview

replies reflected the findings that the controls had generally found it difficult to tackle the task. The children, mainly the controls, expressed how they envisaged arguments to be instructed or facilitated.

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## *Conclusion and Implications*

### SUMMARY OF FINDINGS

The present investigation has positively tested the hypothesis that verbal peer interactions can influence the quality of argumentative writing. The study has also confirmed previous research which argues that small peer-group talking promotes intellectual functions. The findings pertaining to the teacher-taught writers' compositions have also endorsed the contention that explicit direct genre instruction is an inefficient pedagogy. As demonstrated in the present dissertation, there was a significant difference between the quality of compositions written by the controls who were instructed and informed in the structure, and the experimentals who were not directly taught. The oral preparation in small groups appears to have enabled the children to comply more effectively with the argument criteria defined on [page 3] than the controls who replied to their teacher's questioning and listened to monologues. Like in Scardamalia and Paris's research [1985], the controls who had received direct instruction were found to be more preoccupied in trying to provide information than writing purposefully. The replies of the verification interviews would confirm the trend. The present research has revealed that the experimentals who were involved in peer interactions as a pre-writing activity may have generally been more cognitively advantaged than the teacher-taught controls. The experimentals also surpassed the controls in the production of both verbal and written deductive reasoning [Table 4.1, Tables 6.2, 6.3, 6.4, 6.5].

Testing a hypothesis implies that relationships are being sought between the dependent and independent variables [The Open University, 1996]: between the quality of the essay writing and reasoning produced during the pre-writing interactions. The numerical findings of the intended **cause** of the written argument quality [displayed in **Table 4.1**], demonstrates that the **reasoning** and **deductive utterance** frequency was greater among the experimentals [8 and 7 times greater, respectively]. However the categories and their numerical findings are only restricted representations as many other features of language could have been discovered and explored. These classifications were also led to be examined by personal concerns. Moreover, the quantitative analyses were not sufficient to explain the phenomena. They had to be qualitatively clarified and illustrated. These were effected by a personal ‘construction’, with an expected likelihood of bias. Finally, results emanate from short interactional artificial settings, limited by the research design, which normally diminishes the ecological validity of the verbal discourse findings as explained in **Chapter 2**. However, this point, in relation to the present research, is addressed further on, in the “Other influences” item.

The composition writing assessment results are represented by ‘holistic’ scores awarded prior to the specific category ratings, which entails a tendency to react to the whole text rather than to its specific argument criteria [The Open University, 1994b; Knudson, 1992b]. This decreases scoring dependability [Cumming, 1996; Fulcher, 1997]. Nevertheless, multiple assessment and reciprocal consultation by the examiners prior to awarding the scores should have ensured a trustworthy general evaluation, although no ‘inter-rater reliability’ tests could be accomplished [Stibbs, 1979; Goreman et al., 1979; Knudson, 1992b]. Although the result of the reasoning quantification within the writing at micro-level was presented in Tables 6.2, 6.3, 6.4 and 6.5, it should have also been displayed in context as was done with the discourse transcriptions, in order that written text meaning might not be disregarded. Also,

a sustained analysis of this reasoning within the clauses is lacking in this study and should have been effected.

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Scattergrams could have been used to present a summary of the findings which would have demonstrated positive correlations between reasoning utterances and composition scores. Correlation scattergrams would have shown that a higher incidence of reasoning within the peer-talking sessions led to higher composition scores and written reasoning percentages. They would have also indicated that the children's lower cognitive input in the classroom was inclined to produce lower composition ratings and less reasoning within the writing [Miller, 1984, 2<sup>nd</sup> edn; Robson, 1994, 3<sup>rd</sup> edn]. However, the scattergrams could not be achieved because of the entailing technical problems. They would have required the time-consuming or almost impossible task of quantifying each child's reasoning instances separately and independently from the other interacting group members. The inherent discourse context of jointly produced speech would have been discarded and unaccounted for. Speech is not exclusively owned by the speaker, because it is affected by the partners' attitudes [Bakhtin, 1981, in Barnes & Todd, 1995]. To determine the possibility of chance factors which might have deformed the findings, Chi-squared control tests could have been effected. However, it is a much less "powerful" test than the t-test. The t-test had already shown that the difference between the control and experimental written performance was statistically significant with a significantly higher mean [Tables 6.6a and 6.6b]. It had therefore established the strength of the links between the verbal discourse and writing [The Open University, 1994a, p.121; Miller, 1994, 3<sup>rd</sup> edn]. However, these quantitative analyses and their numerical interpretations displayed in the above-mentioned tables can only show that the verbal discourse did have an effect on argumentative writing. They merely indicate that the "collaboration" was "productive" but do not reveal the manner in which it came about as this can only be inferred [Crook, 1994, p.129; King, 1989].

It was mentioned in **Chapter 2** that cause and effect connections are difficult to determine due to a number of complicated intervening physical and social processes [Hage & Meeker, 1993]. Therefore it would be cautious not to categorically attribute particular composition characteristics to the nature of specific preceding interaction features. These can merely be presumed.

### **Interactions and effects on oral reasoning**

The oral expression of inferences and hypotheses, as demonstrated in **Chapter 4**, appears to be due to being encouraged to **state opinions** to peers and to **support viewpoints by providing reasons and evidence**, thus using reasoning markers. The present study endorses other research on learning and cognition, arguing that these are enhanced by the interpersonal social situation in which language is employed. As demonstrated in the small peer-group interactions elucidated in **Chapters 4 and 5**, the informal, **intersubjective social context** in which the peer-group children were engaged, had spurred the use of extended oral discourse by using deductive utterances which the constrained teacher-led lessons had impeded. Moreover, reasoning was seen to be encouraged by the **conflicting opinions** uttered by the peer interaction participants. In defence of their propositions, they were naturally and inevitably using deductive statements to support their viewpoints as argued by Donaldson and Elliot [1990], Phillips [1985] and the researchers who experimented Piagetian conservation tasks. Therefore, as elucidated by Doise et al. [1975], the problem was resolved by orally **agreeing and disagreeing, each child contributing to the knowledge needed to achieve the task**.

### **Oral reasoning and effects on written reasoning and argumentation**

Likewise, capacity to reason, by giving explanations with the use of deductive markers within the writing – as opposed to the controls' tendency to list, use

irrelevant content, recount information, descriptive and expressive – was shown to be greater in the experimentals' scripts. It can be assumed, therefore, that the experimentals used more reasoning markers in their writing because of the necessity to **elaborate evidence**, as they did in their talks, in order to illustrate by speculating and to synthesise, vital criteria for written arguments [Wilkinson, 1986b]. This is probably why their texts were longer. This could be a result of the oral preparation in which they employed more detailed information to support their premises. The experimental research design where the target and controlled verbal preparations were distinctive in their characteristics was intended to help confirm the claim. The controls had mainly been teacher-directed, responding to teachers' specific questioning and listening to their monologues. The experimentals tended to use the argumentative form in their writing whereas the controls' compositions contained more descriptive, narrative and personal elements, sometimes confused and disorderly and at times they wrote comparative essays rather than arguments. In other words, the experimentals were well drilled in articulating explanations due to the talking session which promoted their reasoning abilities in the same manner as the children who participated in a talk learning experiment initiated by Wegerif and Dawes [1997]. It was found that the treatment children had increased their personal reasoning faculties when tested. By contrast, in this study, the controls had not been familiarised with verbalised argumentation apart from some of the School-1 controls who were requested, only once, to use utterances with 'because' during their pre-writing teacher-led lesson. It is inferred that the experimentals had the opportunity to "rehearse" writing verbally [Graves, 1982, p.105]. They were saying to one another "what" they were "going to write" [Vygotsky, 1986, new edn, p.243].

The reasoning markers which the oral reasoning enabled the experimentals to use are also likely to have contributed to the **logical sequencing** of ideas and the essay's coherence, the information order and the linked ideas, hence the general composition structure. This is possibly because the pattern of providing successive points 'for' and 'against' to unify the organisation of ideas mirrors

the peer interaction statements and the feedback received by the partners. Thus, the experimentals also surpassed the controls in their written dialectic, as in their oral performance where they confronted the partners' conflicting viewpoints, supporting personal premises and being countered by another group partner. The series of arguments and counter-arguments, the step-by-step benefits versus drawbacks, the pros and cons, side-by-side, in the written text appear to be a reflection of the oral arguments produced among the peer-group participants. This may have been the reason why the experimentals demonstrated better overall text reasoning, providing a logical structure to the composition which contributed to its congruity [Wilkinson, 1986b].

The experimentals required no help in using written **counter-arguments**, as they seemed well practised during their oral interactions. The interactions had caused talk as well as feedback, which presumably enabled the children to explore written evidence regarding both viewpoints, their own and the opposing ones, which research confirms, children are not normally apt to perform [Wilkinson et al., 1980; Roussey et al., 1999; Knudson, 1992b]. The triangulation interview responses appear to corroborate facilitation through their preceding interactions. By contrast, the controls, as mentioned in the children's interview replies, had difficulties with subject matter provision and were therefore less concerned about form and the logic it required [Scardamalia & Paris, 1985].

Requesting the experimentals to conclude at the end of the interaction has apparently permitted many writers to recapitulate their viewpoints. Their written conclusions were also more numerous and were inclined to be more text-relevant. Nonetheless, the children reported that, during the year, general composition structure had been taught by their teachers who had been specifically advocating conclusions at the end of any composition.

The verbal interaction topic question formulation contained all the necessary procedure for the verbal participants to follow, whereas the controls [except for School-1] had to suffice themselves with teacher instruction. As mentioned in **Chapter 1**, this was one of the experiment's objectives. It is the reason why, after School-1's study observation, it was decided that neither the experimentals nor the controls should be presented with the elaborate topic question during the written task. This was to find out how they could perform with nothing else affecting the writing except for the influence of the peer interactions or the teacher-led lesson. The School-1 controls' interview replies verified that the detailed topic question provided during the writing had actually helped.

The detailed topic question [**Chapter 4; Appendix 2.2**] presumably guided the interacting group members. It required the interactants to state their viewpoints, provide reasons/evidence and consider 'advantages' and 'drawbacks'. As demonstrated in **Chapter 4**, the children during their peer interactions, were found to model orally, or plan, Wilkinson's argumentative structure [1986b]. Their writing reflected the disposition to state an opinion and consider both negative and positive points of both hypothetical situations. However, the controls only rarely took account of both positive and adverse sides in their writing, despite the teachers' extensive coverage, instruction and negotiation of composition form **and** content.

### **'Scaffolding' and 'conflict' and effects on writing**

The interaction transcripts have shown how the children provided one another with support. The participants received peer assistance by reminding one another information. They probably appropriated the information resources due to the specifically purposeful, more or less relaxed interactional setting [O'Donnell et al., 1987; Spurlin et al., 1984]. Support was provided by role-taking, hypothesising and digressing, which is a Vygotskian explanation to the

learning that took place. These ways of talking had presumably linked the children's accessible information and fantasy with the new argumentative knowledge. As Vygotsky [1978] highlights, play and imagination develop abstract reflection. Moreover, the interactions had provided the pleasant setting required to learn efficiently, as confirmed by the experimental children's interview responses. They were thus likely to write more effectively than the controls. Each partner took turns to tutor the less informed in the area of her/his ability, depending on the discussed subject. Performing successful writing on one's own could have conceivably originated from the effects of reciprocal and shared 'scaffolding' which the children provided one another as determined by neo-Vygotskian theory and as explained by Forman and Cazden [1985]. This has been endorsed by the children's triangulation interviews. The research seems to confirm that not only had the less able peers benefited from the more expert contributions of explanatory statements, but those who contributed had profited as well [Webb, 1982; 1989]. The contributors had also taken account of the other learners' requirements [Wood et al., 1995].

The present dissertation shows how the children addressed one another and how they responded. Support was provided by completing one another's statements, and due to disagreement, improvements were made. Utterances were clarified, expanded, adding to the partners' meanings, bridging information gaps and swapping knowledge, asking one another questions, prompting and providing replies. Thus, in applying a 'psycho-social' learning perspective such as in the Genevan researchers' studies, the intersubjective learning context within the peer interactions was presumed, likewise in this research, to help solve the topic question problems, facilitating the experimentals to write more relevant and purposefully controlled information than the controls.

The children appeared to have taught one another [Forman & Cazden, 1985] and, as demonstrated, even the least able partners contributed to the problem's solution. Mentioning aspects of their culture in their speech is assumed to have served as a basis for progressing from the known to the unknown. The children



needed to refer to jointly familiar experiences, as examples and analogies, in order to help recall, to convey ideas more effectively and provide evidence for the points they wished to communicate [Edwards & Mercer, 1991; Middleton & Edwards, 1994; Phillips, 1988]. Talk, in terms of the socially accepted norms, is presumed to have facilitated problem solving and recollecting information as well as possibly how to insert this information in their writing. This phenomenon concords with past research [Light & Ferret-Clermont, 1991; Berkowitz and Gibbs [1985]; Doise et al., 1975]. In addition, the experimentals' interview responses have confirmed that the two mentioned social constructivist processes were implicated in the learning that took place.

### **Impact of contextual subject matter upon writing**

Confirming contentions mentioned in **Chapter 1**, reasoning and argumentative skills are dependent on content knowledge. Without sufficient information, there would be a lack of evidence to support viewpoints [Crowhurst, 1991; Knudson, 1992a; Bereiter & Scardamalia 1987; Freedman & Pringle's 1989]. Bereiter and Scardamalia add that writers cannot plan without available subject matter. The controls performed less successfully than their experimental counterparts, even those in School-2 who were instructed on and reminded about the largest amount of information. It is presumed that the context in which these children remembered subject matter made the difference and enabled the experimentals to surpass the controls. The reason for this is that the 'dialogic'/dialectical procedure within the peer interactions, the exchanges, participants' alternating talk, the statements made and the replies and feedback, the positive and adverse sides etc... tended to reflect on the written scripts. The controls' writing, however, in Bereiter and Scardamalia's terms [1987, p.303] had the propensity to be a one way "trip". The experimentals had more successfully placed the relevant information within the context of the argument. Therefore, they were writing to fulfil the generic objective rather than being pre-occupied with what to write 'next' [Scardamalia & Paris, 1985]. This explains why their compositions were better processed than the controls'. Susan's statement

illustrates: “When you’ve finished you could’ve remembered it...we all discussed it together and just write it down on your own.” The information imparted in the interactions tended to be more discourse-relevant and accessible to the experimentals and already “like fresh”, organised and orderly before they wrote.

As demonstrated in **Chapters 4 and 5** and as confirmed by the interview responses, the experimentals were compelled to recall subject matter, while they needed the information to elaborate and give evidence for their premises. They were thus presumed to be better prepared for the written task where information was required to be written, again within the context of their argumentation, thus organised to provide a premise and reasons ‘for’ and ‘against’. The experimentals have actually claimed that the interactions were facilitating, contrary to the controls who had little or practically no practice in oral argumentation during the teacher-led lesson. The experimentals had seemingly negotiated what they were “going to write” [Vygotsky, 1986, new edn, p.243] and the talks had presumably furnished the children with the writing context [Graves, 1982]. The talks had allowed the children to collect content within the oral argument context “in the light of goals” [Bereiter & Scardamalia, 1987, p.69] thus being more likely to be ready to comply with the generic form. The controls in the teacher-led lesson, however, generally did not recall content material as they were orally arguing but as they were responding to teacher’s questions or listening. This is probably why many controls knew the information but were confused as to the genre they were required to employ, or found it hard “putting” ideas “into words”. As confirmed by the interviews, the experimentals tended to write with less hesitation than the controls.

### **Speech and writing relationships**

Thus the experimentals, during their writing, have been able to do without the contextual prompts which verbal discourse provides presumably because they had extensively been able to use them during the peer-group preparation. The

controls have been less capable of coping without those situational speech cues and have therefore not been as able to modify their communicative mode from speech to writing as Bereiter and Scardamalia would have explained [1987].

### **Other influences**

As mentioned by the children during their interviews, success was not only due to the readiness supplied by the interactions. The interactions are most likely to have also provided them with credit and self-confidence. The Hawthorne effect cannot be underestimated. However, I had communicated, to **all** the pupils, my intentions and the purpose of their contribution to my research. Therefore, all the children, controls and experimentals, were **equally** aware that they were valued. The experimentals realised that they were not performing a typical activity and enjoyed it, which possibly influenced their performance [Rogers, 1994]. But, as emphasised earlier, one of the purposes of this type of preparation for argumentative writing was its agreeable aspect on which the facilitating mechanism is based. The adult's guidance through the interactions, reminding the topic question and prompting subject matter, should also be accountable, although the same procedure would normally occur during similar classroom activities. Therefore, even if certain support factors might have affected the written argument, they would not have had a strong impact on the research result validity.

### **EVALUATION OF RESEARCH METHODS**

In my view, the various methodological approaches were necessary to investigate the different features of classroom discourse, peer-group interactions and the ensuing writing. The 'multiple' strategy permitted drawing the conclusions and making the claims enumerated above [Snyder, 1995].

The experimental design has facilitated contrasting and comparing two different learning/teaching situations in preparation for argumentative writing, the common teacher-led condition and the readying by interaction among a small group of peers. The experimental method of enabling each of the controls and experimentals to try distinctive pedagogies has permitted identifying and recognising the features of talk which presumably made the difference in influencing the written argument quality. It has also allowed to compare the effects of the two talking conditions on argumentative writing by assessing the children's scripts, despite Crook's [1994] convictions about the nature of post-tests [Chapter 2]. The written text qualitative depiction according to the three main argument criteria was necessary to compare the writing features of those experimenting the pedagogy with those who were taught by the teacher, despite the bias that this entails. The quantitative text assessment helped with the statistical representation of the research findings [The Open University, 1996]. It also served to provide an objective opinion on the children's writing in order that the qualitative findings might be corroborated [Bird, 1992]. The deductive reasoning within the written text could be measured [Martin, 1989, 2<sup>nd</sup> edn], to find out whether this writing feature was affected by the interactions.

The naturalistic observation, audio-recordings and qualitative interpretation have contributed to the description of the discourse processes, thus studying the characteristics of the children's interactions and those between teacher and pupils. The learning experiences and activities were observed while they were encountered, thus within their social contexts [Crook, 1994], however, not without the risk of producing subjective interpretations [Swann, 1994; Hammersley, 1994]. The collaborative discourse was analysed in terms of the pupils' joint understanding generated during the interactions. The interpersonal, convivial condition known to sustain, prop up the co-operative talks and entice learning was observed within the context in which the interactions were accomplished, although these situations were artificially set up by the experimental design and might have triggered reactivity effects [Crook, 1994, Hammersley, 1994; Barnes & Todd, 1995]. The systematic observation of both

learning situations, group and classroom interactions, has allowed the instances of reasoning and deductive statements to be quantified. The reasoning produced within a defined lapse of time in each of the experimental and pervasive situations could therefore be contrasted [Table 4.1]. Last, but not least, the interviewed pupils' statements contributed to confirm that facilitation of the written argument was influenced by the small group interactions.

*Each of the methodological approaches used for the present research, therefore, has assisted in expounding the different features of the research question which was being addressed [Hammersley, 1992; Henwood & Pidgeon, 1993; Snyder, 1995].*

## **EVALUATION OF PRESENT RESEARCH AND IMPLICATIONS**

On numerous occasions, the question of researcher bias had occurred to me. Perhaps someone less involved than myself should have supervised the peer interactions to increase reliability and ecological validity. However, this would have entailed logistical complications. Although small group work is reported to be an instituted activity in primary schools [Crook 1994], this was not observed to be the case in the visited schools, either for the pilot studies or the present investigation. Ogden [2000] reports that in primary schools, teachers group children with the expectation of inducing talk and collaboration which is not necessarily sufficient to promote group work. Therefore, having teachers perform the task of monitoring the group talking would have implied instruction and training in handling the activity. The duration of my visits to the schools would have had to be lengthier. The "staffing" shortages due to teachers' occupation with the peer-group interactions would have required the contribution of supply teachers [Galton & Williamson, 1992, p.176]. Considering the difficulties in accessing the sites, mentioned in **Chapter 2**, the headteachers would have been less inclined to accept my presence to conduct research. Knowledge of the entailing efforts would have led the teacher to a

more likely reluctance to participate. Moreover, bringing an extra outsider to help in the research would not have been feasible *vis-à-vis* the headteachers and would have been costly. A major drawback for research would have been that the small peer-group talks would have had to be observed by two persons instead of one, thus curbing the intersubjectivity required for the interactions and therefore diminishing the ecological validity of the examined conditions. These are the reasons why it was decided that the teacher would contribute what s/he could perform best – teach – and that I would monitor the peer-group interactions, no matter what other disadvantages this might have occasioned. Nevertheless, this investigation, as it is, has shed some light on effective principles for the teachers to monitor peer-group interactions to prepare argumentative writing as well as on implicit learning on the part of the participants.

There were at least two talking sessions which were unsuccessful due to reactivity effects – presence of audio-recorders or myself – or due to inefficient talking skills, or perhaps to my own mismanagement. At some point, I had envisaged not to include those interactions together with their corresponding written texts as part of the presented data. However, it would have been difficult to find rapid replacement schools due to time constraints. As mentioned earlier, accessing schools was not an easy task. The findings concerning the significant differences between controls and experimentals, would have been more or less the same had I removed the 1C and 3A experimentals and their 6 matching controls.

Another problem took place, this time during the writing phase. The children were quiet when writing but were not altogether restrained from talking. The validation interviews reveal that Dorothy, a control pupil in School-3, was prompted by Georgina, another control, because she had cried. Neither the teacher nor myself had noticed the incident. It is therefore possible that other un-noticed cueing situations might have occurred. To prevent prompting, specific places should perhaps be allocated for each child in advance despite the

fact that desks are sometimes shared. Pupils should also be reassured by either the teacher or the researcher before the written task begins.

As for the preparatory stage for writing, certain interactions needed more support than others. If all the children were practised in interactional abilities, the conditions would have been ideal for research. Unfortunately, even for my preliminary study, an additional school was investigated, because the first set of participants consisted of inexperienced communicators. Thus this type of research could be more successful and more useful in the context of action research, where the teacher would first ensure that his/her pupils were skilled speakers before engaging the children in peer interaction for argumentative writing or any other task.

Action research as occurring within the teacher's practice, would allow the practitioner to have an improved perception of what goes on within the observed collaborative process. Hammersley [1993] recognises that sometimes *conventional educational research cannot solve specific classroom problems*. He nevertheless explains that research cannot merely be teacher-directed. Collecting data may pose a problem because teachers cannot perform the simultaneous tasks of both observing and the more important tasks that are expected of them. It is also noted that teachers seldom go further than the phases of data amassing and making provisional assumptions in their research. It was found that they were unable to give accounts of the manner in which 'learning' strategies might be modified by varying pedagogies. These are the reasons why a qualified research/counsellor is recommended to work hand-in-hand with the teacher-researcher, to help 'theorise' and promote the suggested pedagogic mutations. Groups of teachers could also work together to support one another in order to intensify their knowledge of peer-group collaboration [Galton & Williamson, 1992; Mercer, 1993; Barnes & Todd, 1995]. As mentioned in **Chapter 2**, this study has investigated a facilitating procedure to **introduce** children to written argument. It has not researched how the skill might be appropriated over time. To find out, it would have been necessary to have the children write another

composition several weeks later. Longitudinal research is needed to find whether repetitive interactions might continue to be effective, which justifies the need of the combined endeavours of teachers and researchers.

The gender differences in the talk and ensuing writing were also not researched, although the findings of an experiment such as mine could demonstrate considerable distinctive gender features if closely re-examined. Other comparative studies featuring all-boy peer talk contrasted with entire girl peer-group interactions and the effect of each condition on subsequent writing could be performed. If one is not investigating gender differences, as in the present research, 'direct control' could be employed by using single sex participants. The problem of population accessibility was a disadvantage in my case [Robson, 1994, 3<sup>rd</sup> edn].

Other items related to the current research particularities have been reflected upon. Different types of topic question and less complicated ones, must also be studied in order to explore their effectiveness, such as the one used by Bereiter and Scardamalia "Should you be able to choose what things you study in school?" [1987, p.163]. The type of topic question we have dealt with here explored how children learned to cope with 'dialogic'-type pros and cons as well as with comparisons. It was thought that a more simple question would have induced a more "linear" and "descriptive" approach to argument [Roussey & Gombert, 1996, p.288], a task which perhaps most children would have found easier to perform. This would have rendered it difficult to discern differences in strategy between the controls and the experimentals.

Replication with an additional treatment group involved in direct instruction of discourse criteria together with peer interaction would enable researchers to find out whether written argument quality might be increased or hindered. This is to follow Hillocks's [1984] suggestion that a variety of strategies must be experimented on and assessed. Whether note-taking during interactions would affect writing could also be investigated. Although Crook [1994] argues that



future research should focus on investigating contexts of ‘common knowledge’ known to entice learning among group partners, it is my view that regarding argumentative writing, other learning strategies as well as outcomes should also be explored and experimented on.

## **IMPLICATIONS FOR EDUCATIONAL PRACTICE**

Barnes and Todd [1995] stress that groups of three are the perfect size of an interacting group and the number should not exceed four members. This is to avoid division when in opposition, avert loss of self-assurance of deficient contributors and to decrease the children’s managerial pressure.

Classes with large numbers can implement peer verbal collaborations procedures if children are practised in interactional skills. Since children are merely experienced in common social conversational talk among one another and are subjected to teacher-led discourse in the classroom, it is necessary to educate them in the appropriate verbal collaborative mode which involves learning to understand others’ perspectives. This would prevent interactant domination and being ostentatious [Fisher, 1997a]. Successful talk is defined as that which engages in shared argument and reasoning and where all participants contribute to one another’s views. This “exploratory talk” fosters reasoning and co-operative learning. It is thus recommended that teachers set up principles for interacting in order to achieve this talk category [Scrimshaw & Perkins, 1997; Mercer et al., 1999; Wegerif & Mercer, 1997b, p.277]. “Talking and listening” to one another are advocated, to make judgements, support them, and share one another’s ideas, hence interactional situations where pupils can acquire a sense of esteem and consideration for others’ contributions. Apart from practice in intersubjective social co-operative competence, training in ‘conflict’ handling techniques is also essential. [Dawes, 1997, p.189; Atkinson & Green, 1990; Mercer et al., 1999; Johnson & Johnson, 1994].

Webb et al. [1995] recommend instruction and training in adequate elementary conversation to get acquainted with talking patterns and partake in discourse. Mercer, Wegerif and Dawes [1999] exemplify the teacher's revising and strengthening the children's notion of basic rules of verbal interaction before a talking exercise, by oral negotiation with pupils. The principles include asking questions about what partners 'think' and asking 'why', replying to questions and giving reasons, and ensuring that all participants take part. Barnes & Todd [1995, p.101] add that group partners should attempt to comprehend "both sides of the issue". Dawes [1997, p.192] advocates "talking lessons" and Bennett [1994] emphasises practice tasks which comprise both mental and 'social' requirements and the teacher's assistance before, during and, as feedback, when the task is completed.

Transcripts of group talk indicate that interactional tasks are difficult to tackle if they are not engaging, congruent with the pupils' capacities and if task directions are not well explained. In our case, the topic question was sufficiently detailed to contain the verbal and written argument requirements. In addition, it is suggested that pupils should understand the purpose of the activity and what it requires them to accomplish. Thus learners, assisted by their teacher, could negotiate methods for successful group talk, enumerate rules and parameters. This would allow pupils to be dependable and arouse their sense of individuality. Pupils would begin by short practice sessions and gradually make progress in 'listening' and tackling argumentation. Children's co-operative assessment of their own peer talking tasks would help ameliorate their interactions and envisage novel ways of working together. Pupil knowledge of common achievements and aims to be accomplished by the collaboration is a factor which increases successful interlocutor mutuality. Effective group self-management is also a function of the teacher's non-verbal signals, distance from the interacting groups, and amount of teacher contribution. "The teacher's presence can support and refocus the students' talk" when the necessity arises, as was done during the present study [Galton & Williamson, 1992; Mercer, 1993; Rogers, 1994; Barnes & Todd, 1995, p.103]. For Phillips [1992, p.155], pupil

responsibility and understanding of the co-operative tasks can be achieved by establishing “argumentativeness” and “criticality” as ordinary classroom activities, with constant inquiry and questioning about the specific task motive.

Also, to encourage collaborative talk, certain stimuli and ‘resources’ are advocated. These include displayed visual material on the classroom walls, also comprising the pupils’ own work. The use of the computer is essentially recommended to encourage talk. Thus the group members would be engaging in collaboration by making themselves understood through items which they can commonly designate [Crook, 1999]. The organised computer task or software motivating the collaborative work would be planned for the purpose of defining and explaining the interactional objectives to the interacting peers [Crook, 1994]. These supporting facilitators for peer discourse could therefore be used for or complement the argument topic question for the writing preparation. Using electronic software designed for children is specifically recommended to engage in argument, agreement and disagreement in small groups [Wegerif & Dawes, 1997]. However, it must be reminded that the children’s talking for argumentative writing is **not** necessarily directed towards reaching unanimous conclusions as in ‘exploratory talk’.

As mentioned above and earlier in **Chapter 5**, the teacher’s task during peer talking is to provide support, information when required, and feedback . Thus the teacher could monitor the interactions by shifting from one small group to the other to assist, motivate and elucidate what has not been understood [Barnes & Todd, 1995]. Here the teacher, could remind information and reformulate the argument topic question when necessary, to be guided by it when digression has exceeded, to emphasise task purpose or when pupils are engaged in extended descriptive talk.

In preparing argument writing by peer-group interaction, therefore, the support must converge on replying to the topic question which would have been specifically set to allow the pupils to state a viewpoint and justify it by giving

reasons why. The topic would be challenging and relevant to the children's interests. It would contain sufficient clues to ensure the speakers' independence and to permit them to employ as much remembered content detail as possible to enable them to provide evidence for their opinions. The incident with peer-group 2A, mentioned in **Chapter 5**, about the adult trying to initiate talk by asking, "so // the 1940s was what?" shows that it was inappropriate strategy. The children did not reply to the topic question itself and did not begin by stating personal opinions – the object of the written argumentation learning pedagogy. The aim of the peer-group talks was not merely to recall subject matter but to remember it within the particular verbal argument context which is assumed to implicitly lead the interactants to practise information-processing. In my view, therefore, the adult's support should be constructive and focused on the manner in which the topic question is worded rather than on inciting the children to recount direct knowledge or descriptive information. The teacher could address the topic question to the whole class and inform the children about the manner to tackle it before the pupils split into small groups.

Stressing "the notion of group responsibility for failures and successes" to children engaging in group interactions, would ensure the session's success [Fisher, 1997b, p.34]. In our case here, apart from reminding talking guidelines, teachers should request pupils to follow the various requirements of the set argument topic question, so that each partner would ensure that each item demanded by the question was covered. Teachers would explain to the partners that the success of their interaction would be determined by their own verbal *contribution and input*. With this strategy, the group interactants would implicitly be led to engage in reasoning and dialectic discourse which includes comparisons and contrasts, pros and cons in preparation for argumentative writing, rather than the one way, exposition or knowledge recount.

But small group talk entails experience in organising the classroom area to contain them. The more responsible children might be perfectly capable of handling "unsupervised" interactions in other areas of the premises and thus be

given more space [Prisk, 1987, p.88]. Their absence from the classroom, in my view would alleviate the noise of simultaneous interactions. While the more dependable children can cope in peer-groups on their own, the teacher would find it easier to monitor subversive pupils [Galton & Williamson, 1992]. Prisk's research confirms Barnes and Todd's [1977] finding that using an audio-recorder can act as a motivational device for interacting participants. It induces collaboration, speech clarity and diminishes digression, and so can be employed when the interactants are not surveyed. Recordings have other advantages. Playing back the tapes acquaints teachers with their pupils and monitors their understanding. Listening to the recordings in the pupils' presence helps demonstrate the teacher's interest in their pupils and serves to provide appraisal [Barnes & Todd, 1995]. It could also serve to compare talking form and content with written argument criteria, although a time-consuming activity for teachers.

Pupils must also be made aware of the manner in which the interaction has affected their own change and progress when the activity is accomplished [Forrestal, 1992] and therefore that it has influenced the ensuing written argument. This can be implemented by discussion during the writing process when the task is completed or marked. Compositions can be read aloud or silently and evaluated by other members of the class. In order to follow process writing strategy, it is up to the teacher and/or pupils to determine whether this pedagogy would be effective when accompanied by commonly practised revision and re-editing procedures in order to eventually improve the written argument once it has first been drafted.

Structured collaborative activities conducted within all curriculum content is advocated to promote reasoning, enculturate pupils into literate language and the use of relevant "register" [Crook, 1999; Fisher, 1997a, p.47]. In my view varying the subject matter that can be used is essential to train children to deal with verbal and written argument which can prepare them for future academic and adult social and cultural needs.

Putting aside some research limitations and certain children's lack of talking experience in the present investigation, the findings of this dissertation nevertheless indicate that peer interaction, as an introductory preparation for written arguments, is an efficient facilitating strategy. It also shows that implementing this pedagogy is perfectly feasible by replying to a challenging topic question, in pleasant conditions, within the helpful curriculum subject matter rather than in "cold" compulsory situations [Freedman & Pringle, 1989, Wilkinson, 1986b, p.56].

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Omitted section of Wilkinson's criteria due to children's scant use of this writing attribute:

*Texts showing a superior level of cognition are those which go beyond the mechanics of structure and organising information, by "providing a context, historical, political...social", thus ability to think beyond the recalled information and to demonstrate a "search for definitions" and a competence "to analyze" [Wilkinson, 1986b, p.54].*

**The first of the three scores [from 1 to 7] is for oral ability**

**The third is the general ability rating**

**SCHOOL-1**

### Matching experimentals

Colin 777

**Clare 777 [767]**

Jeff 666 [676]

**Susan 666**

Lily 656

Gill 555 [545]

**Rachel 444**

Nigel 444 [434]

Simon 433

**4 boys 5 girls**

### Peer-Group A

Simon 433

Gill 555 [545]

**Colin 777**

**Susan 666**

Nigel 444 [434]

### Peer-group C

Jeff 666 [676]

### Lily 656

**Rachel 444**

**Mona Gélant**  
**M7148774**

## Matching experimentals

Jenny 777

Debbie 676

Stephen 766

Karen 555

Rick 555

Agnes 555

Lynn 455

Peter 444

Lee 444

**5 girls 4 boys**

### Experimentals within their groups:

### Peer-group A

Debbie 676

Lynn 455

Peter 444

### Peer-group B

**Jenny 777**

Lee 444

**Karen 555**

### Peer-group C

**Stephen 766**

Rick 555

Agnes 555

**SCHOOL-3**

**Controls in order of ability**

Arnold 677  
Betty 766  
Dorothy 666  
Lisa 566  
Charles 655  
Georgina 555  
Shaun 555  
Emma 455 [new]  
George 444 b

**Matching experimentals**

Anna 677  
Darren 766  
Jane 666  
Patricia 566  
Louis 655  
Carrie 555  
Tony 555  
Cathy 455  
Dell [new] 444

**4 boys 5 girls**  
**2 ethnic minorities**  
**7 white**  
**[1 new pupil]**

**4 boys 5 girls**  
**2 ethnic minorities**  
**7 white**  
**[1 new pupil]**

**Experimentals within their groups:**

**Peer-group A**

Anna 677  
Carrie 555  
Dell 444

**Peer-group B**

Darren 766 - [back-up pupil who did not attend the practice talks the day before].  
Cathy 455  
Tony 555

**Peer-group C**

Jane 666  
Louis 655  
Patricia 566



SCHOOL-4	
Controls in order of ability	Matching experimentals
Judith 777	Paul 777
Dick 756 [766]	Adrian 656 [666]
June 565	Christine 566
Sandra 666 [656]	Daniel 644 [654]
Jeremy 444 [454]	Pat 545 [555]
Linda 333	Kim 333
3 girls 3 boys	3 girls 3 boys

Experimentals within their groups

Peer-group A

Paul 777  
Kim 333  
Adrian 656 [666]

Peer-group B

Christine 566  
Daniel 644 [654]  
Pat 545 [555]

**TOTAL**  
**controls: 18 girls and 15 boys**  
**experimentals: 18 girls and 15 boys**

**School-1, Year-5 pupils [late in the year]**

Which of the two, the **Tudor times** or the **present**, [do you think] would best suit you to live in? Give reasons for your preference, and why you disagree with the other ways of living, by using examples of *customs, attitudes, living conditions, ways of thinking etc . . .* from both periods. Base your discussion on your knowledge of the two historical times, the **Tudor times** and the **present**, their advantages and drawbacks.

**School-2, Year-5 pupils [late in the year]**

Would the **1940s** be a better time for you to live in than the **present time**? Give reasons for your preference, and say why you disagree with the other conditions and ways of living. Use examples from both times, the **1940s** and **1990s**, their advantages and drawbacks.

**School-3, Year-6 pupils [late in the year]**

Which of the two, **Victorian** or the **20th century** industrialism produced less damaging human and environmental disasters, do you think, and which period would therefore be a better time for you to live in? Give reasons for your preference by using examples from the periods, and say why you think the period you have not chosen has produced worse human and environmental damages. Base your discussion on your knowledge of 19th and 20th century industrialism, their advantages and disadvantages.

**School-4, Year 6 pupils [early in the year]**

Which of the two, the **Norman times** or the **present**, would be a better place for you to live in? Give reasons for your preference, and why you disagree with the other ways of living, by using examples of *customs, attitudes, living conditions, transport, ways of thinking, governing, warfare etc . . .* from both periods. Base your discussion on your knowledge of the two historical times, the **Norman times** and the **present**, their advantages and drawbacks.

Dear Mr Harris,

This letter is to inquire about the possibility of carrying out educational research in your school. Mr Aaron Reid, has probably informed you of my intention to write to you. The research would contribute to my doctoral dissertation [Open University, Doctorate in Education programme, Language and Literacy line]. I have been investigating argumentative writing in various schools during the past two years. Because writing reflexively is difficult for children, the purpose of the study is to find ways in which teachers might introduce Key Stage 2 children to this genre as one of the National Curriculum requirements.

The research would be conducted with the participation of 10 to 11-year-olds. If your Year 6 teacher feels s/he would rather focus on the SATs, your Year 5 instead might be able to participate.

The children should not have had any prior lessons or experience in this form of writing. This study is a comparative one, intended to contrast a teacher-led group of children with small self-taught groups as they are **introduced** to this written form. Thus the children should not be prompted and no preparation of any kind is required by the teacher before my arrival. This would otherwise jeopardize the research validity. The research activities will not exceed 3 hours.

Before the study can be carried out, the concerned teacher and I would need to plan the investigation together. My presence in the classroom during the periods of the teacher's choice for a few days prior to the study would facilitate my role as researcher. This would allow me to get to know the pupils. It would serve as a mutual acclimatising period to minimise the children's reactivity effects and so that they can take part in the study in as natural a manner as possible.

A reply would be appreciated on whether one of your teachers would accept to assist me. I shall ensure that the undertaking does not disrupt the teacher's agenda. The experience is certain to be beneficial for the concerned pupils. Anticipated thanks and best wishes.

## APPENDIX 2.4

### Examples of plan for the day handed to the teacher in the morning

Mona Gélata  
M7148774

[To Teacher-2]

Revised time table for 21st April:

Morning:

9.00 am -Dealing with absences and allocating back-up children

9.10 -Teacher led lesson of 30 minutes [3 self-taught groups will not attend]

Around 9.45, Peer Group self-taught sessions will begin

Peer Group A - 20 minute session

Peer Group B - 20 minute session

Peer Group C - 20 minute session

[a longer time than the above will be taken, to take account of getting settled before the activities, getting ready to leave, moving in between, changing cassettes, trying out recorder, rewinding etc...]

Probably 2 self-taught taught groups will fit in before morning break which begins at 10.40.

11.00 last peer group session

Afternoon:

1.05 or 1.10 writing task will begin [all pupils] - 35 minute activity.

When activity finishes, each of the participating children, 18 in number will be withdrawn for a short interview.

[To Teacher-4]

### **Wednesday 6<sup>th</sup> October**

**8.30 withdrawing peer-group A then peer-group B for their preparation for the writing.** The duration would be about 20 minutes for each-group.

However a longer time should be anticipated because of the distance between the library and the pupils' classroom. [Library???? They should not be interrupted]

9.35/9.40 [probably later than 9.40 as I have to carry the equipment from the library to the classroom and get settled] **teacher-led preparation for the writing for about 20 minutes.** The children involved in the peer-group preparation will not attend.

**10.10 the written task for all of teacher-led and peer-group children.**

The peer-group children will join the teacher-led children and the non-selected pupils in the classroom to perform the writing. Writing should take about 35 minutes. We'll let them know they have 35 minutes but when time is up we should be flexible to allow the children who have not finished to carry on.

When this is completed the children would go to their normal activities.

**Informal interviews** with 12 pupils [the 6 partaking in the small peer-groups and the 6 teacher-led children]. These will be withdrawn one at a time for 2 to 3 minutes.

Writing characteristics which served as guidelines for assessment, the two examiners' and mine.

Name.....	School.....	
1. stating standpoint ..... does the child support her/his premise, give evidence?.....		
supporting standpoint, evidence - reasons/examples to support [detailed/elaborate/developed]		
little detail	any listing? items of comparison in disconnected areas of the essay	
some detail	evidence is implied, tacit, not direct	
considerable detail	direct examples - not indicating contrast	
exceptional detail	direct examples - indicating contrast within context of a comparison	
preferring one period because of what the other doesn't have .....		
preferring one period because of everything it has to offer [positive side of one period].....		
not much about the preferred period .....		
positive side of preferred period, negative side of the other .....		
positive and negative side of preferred period .....		
positive & negative side of preferred period, one side of the other [missing?].....		
positive and negative side of preferred period , both sides of the other [indicate degree].....		
2. logical sequence and conclusion:		
no logical sequence	no conclusion	does the essay form a purposeful/meaningful whole?
little logical sequence	with conclusion	does the essay have general coherence?
some logical sequence	relevant or derived conclusion	do explanations support thesis without connecting?
logically sequenced	is the essay clear, does it make sense?	do explanations connect to support thesis?
3. structure and information processing:		
no apparent structure	jumbled order of information	
some structure	story-telling, knowledge-telling	
considerably well structured	some controlled information [or controlled order of information]	
very well structured essay	controlled information [or controlled order of information]	
-some classified information <b>within the sections</b> ie with pros and cons side by side, or well ordered, or with similar information		
-considerably well classified information <b>within the sections</b> ie with pros & cons side by side, or well ordered, or with similar inf.		
-very well classified information <b>within the sections</b> ie with pros & cons side by side, or well ordered, or with similar inf.		
[retrieved content and classification of information should be based on writing purpose instead of available subject matter]		
particular remarks:		

This was a game which required to match the animal with its description.

It was a photocopied game in which the description of each animal was in a grid.

The animal pictures were cut out to be used. These photocopied sheets had been provided to me during an Open University working weekend.

## APPENDIX 3.1

### Transcription Convention

Mona Géla

M7148774

This is an adapted version of Edwards and Mercer's [1987] transcription convention.

As children's talk is continuous with no clear-cut indication of ending [Donaldson, 1987, 2<sup>nd</sup> edn; Phillips, 1988], capital letters and full stops to delimitate utterances were not used. Neither were they used for the other verbal statements, such as teacher/pupils, in the transcripts.

[ . . . ]      Words undeciphered, or incomprehensible speech. Each point represents what was thought to be a heard syllable.

.....      Omitted irrelevant discourse

/      Short pause, less than 2 seconds

//      Longer pause

**Bold letters**      Loud or accented speech

=speech=      Overlapping or simultaneous speech  
=speech=

[*words  
between  
brackets*]      Anything mentioned between brackets represents descriptions of speech or actions, observations on happenings or manner in which discourse has occurred i.e. anything which is not direct speech.

[213]      Numbers between brackets: audio-recorder counter number at this point.

?      At the end of an utterance which sounds like a question.

Emma

<u>Victorian Disadvantages</u>	<u>20<sup>th</sup> Century</u>
factory's	Cars, smoke and
pollution	pollution. Disasters
payed little	[lots of]
for waages blue	
porridge to eat	
<u>Advantages</u>	<u>Advantages</u>
Not much disasters were	do get paid
going on	a lot of money

I would like to be in the 20<sup>th</sup> century

George	
Victorian	20 <sup>th</sup> Century
disadvantages advantages	advantages disadvantages
bad food	good food
diseases	good wages
bad wages	hardlyany
polution	diseases

Arnold

“The problems are in the victorian times were the houseing space and the the size of the rooms they lived in also the pollution in the streets which tody we don't have that problem. Today we have the problem of pollution I would prefer 19<sup>th</sup> century.” *[he means the 20<sup>th</sup> century]*

Betty	
Disasters.	
Today - Oil leaks	Victorians - Factory pollutions
Road accidents	Death by machines
Tree felling	Landslides Coal making most pollution
	Citys growing up
Advantages	
Roads to get around on	Still quite natural

Dorothy

Victorian time - green house hase gas pollution working hours very long conditions very bad - smelly

20<sup>th</sup> Century-conditions - o.k reasonable hars pollution oil spills-kills birds, fish pollutes air cars



Lisa

Victorian		20 <sup>th</sup> century	
advantage	disadvantages	advantage	disadvantage
	pollution	fair food	pollution
	bad wages	fair wages	
	bad food	not so	
	diseases	many	
		diseases	

Charles

20<sup>th</sup> century

Victorian: Work condition : danger were ever you go  
Extremely hard . very little wage. Most people die. The mines. The deep pit  
theatyou go down

Georgina

Victorians - are very dirty and pollution in factory

Shaun

working conditions = Hard smelly long shifts  
20<sup>th</sup> century conditions = clean not so long

Victorian environment

**APPENDIX 4.1**  
**Individual characteristics of each peer-interaction**

**Mona Gélât**  
**M7148774**

**School 1**

**1A**  
Clare 777 [767]  
Gill 555 [545]  
Simon 433

A particular aspect of School-1 peer-group A's interactive session was their production of the most abundant inferential and hypothetical utterances and long, sustained statements, mainly controlled by Simon the least able of the 3 interlocutors. The children in their verbal discourse were also actually modelling the argumentative genre without being aware of it. They were doing so by stating standpoints and supporting them by providing evidence and comparing the two historical periods thus finding both the pros and cons of each period. They were hypothesising, taking roles and speculating about going back in time with a time machine.

**1B**  
Colin 777  
Susan 666  
Nigel 444 [434]

In contrast with peer-group A, where one child at a time, usually Simon, spoke of the pros and cons of the two historical times and compared them, each of the three children in Peer-group B contributed to the same utterances, thus making shorter statements than peer group A and putting equal weight in the points they had to make. Whereas 1A were rivalling with one another, 1B were more collaborative. The participants shape the genre in arguing both sides of the topic question, compare, give evidence and examples. They demonstrate intricate ways of reasoning, hypothesising and especially in reasoning by analogy to clarify explanations to their interlocutors. These were amused and constantly laughed at their own jokes.

**1C**  
Jeff 666 [676]  
Lily 656  
Rachel 444

There were difficulties with peer-group C. Rachel had fits of nervous laughter until more than half-way through the talking session. It was therefore necessary to intervene on numerous occasions in order to sustain talk. It is my belief that Rachel spoiled the efficiency of the talking session, although the subsequently written compositions appear to have been considerably successful. Jeff was awarded 90% and both Lily and Rachel 65%. The reasoning scores within the writing are as follows:

Jeff = 100%  
Lily = 42.86%  
Rachel = 85.71%

However, as will be seen in the analysis of the written task, both Lily and Rachel did not fully address the pros and cons in their argumentative writing.

## APPENDIX 4.1

### Individual characteristics of each peer-interaction continued .....

Mona Gélard  
M7148774

#### School-2

##### 2A

Debbie 676

Lynn 455

Peter 444

Characterised by loud background noise. At first, there were more than 25 children queueing near-by waiting for their teacher outside their classroom. The interaction began unsuccessfully because of the inappropriate adult prompt. As a result, the adult reminded the pupils of the topic question to make them state their opinion on some occasions and there was some prompting after pauses. But later, there was collaboration as well as vehement argument over the conflicting viewpoints. The interaction was held in the common library which was extremely noisy because opened up to all other areas of the school. We could hear playground noise and doors slamming, children cheering and shouting. It took a longer time [probably 3 times longer than other sessions] to transcribe the talk. However, trying to end the talks with these children is quite a long process because they go on and on [26 mins 20 secs]. The session is characterised by frequent completion of a child's statement by another. There is thus much 'duetting'. Another particular trait is the repeated questioning by the pupils to one another, for more understanding, clarifications, tag questions, to remember, to speculate etc... Although Peter is the least talkative, all three children do contribute to the oral modelling of the genre, in their comparisons thus discussing both positive and negative sides of the subject.

##### 2B

Jenny 777

Karen 555

Lee 444

We used the infant library which was quieter. However teachers came in to use the photocopying machine despite the 'silence' notice on the door. This interactional session sounded much more natural than the 2 preceding ones. The children were very much at ease. There was a great deal of digression especially by Karen, who sometimes did not respect turn-taking and argued in terms of her feminist views. The three participants moved fast from one subject to another.

##### 2C

Stephen 766

Rick 555

Agnes 555

Although the participants were in a way responding to one another's statements, they were mainly in agreement. They did not challenge one another's ideas as did most of the other peer groups. There was therefore a great deal of generation of content and straightforward talk. A "we did / we didn't" episode was an indication of discord and collaboration. This was followed by two others. Stephen reasoned well and at times directed the interactions: "why?", "do you agree?" "who's going to begin?" He was definitely the most expert peer. However, he had a speech defect, spoke in slow cadence, stuttered and was difficult to understand. The peer-group was not as lively as many others. There were too many long pauses and whispers. But there was improvement as they proceeded. Some pauses were particularly long [9 to 16 seconds] as illustrated in Appendix 5.1. Unlike group 2B, the 2C pupils were relatively courteous towards one another. Most of the groups tended to naturally contrast the two historical periods. With group 2C, however, the adult tried to encourage the trend.

Appendix 4.1 continued.....

## **APPENDIX 4.1**

### **Individual characteristics of each peer-interaction continued .....**

**Mona Gélât  
M7148774**

#### **School-3**

##### **3A**

Anna 677  
Carrie 555  
Dell 444

3A had the longest pauses [refer to appendix 5.1]. There were many minutes of complete silence in this session. From the interaction's outset Anna compares both situations. Anna's particular way of thinking was by reformulating what she had already said in a different manner to be more explicit. The other two participants were also repetitive at the beginning, repeating the same information with slight variations. However, Anna was able to weigh the pros and the cons while following the same structure as the topic question. Her explanations, recaps and repetitions have served her to understand the topic question and clarify it to herself and the other two participants. These children produced 52 deductive statements. Only two of them were hypothetical. Thus there was very little speculating and hypothesising compared to the other peer-group interactions. There were numerous instances in which 'like' was used. This interaction contained very little disagreement among the speakers.

##### **3B**

Darren 766  
Tony 555  
Cathy 455

Darren had not attended the practice talks the day before. He was a back-up pupil but seemed to have managed the interaction well. He was definitely the peer-group leader. Tony speaks least but his contributions are relevant. In the opening statements, the children were already stating viewpoints and supporting them by providing evidence and reasoning deductively. They were also comparing, thus arguing the pros and the cons. They were therefore modelling the genre from the very beginning of their interactions. They tended to make consecutive comparisons, used a great deal of analogies and illustrations. However, at times they were found to be merely comparing both eras rather than replying to the topic question. They had to be reminded of the topic question on several occasions.

##### **3C**

Jane 666  
Patricia 566  
Louis 655

Jane uses 'leads to' several times in her explanations, denoting cause and effect relationships and logical sequence. Jane also provides subject-matter and appears knowledgeable. Louis and Patricia also reason logically. The three participants ask one another questions, "why?", "what age?", "how do you know?", "what century are we now?", "how do I explain that?". They thus turn to one another for support, and sometimes laugh at what they say. The hypothesising episode is interesting as they imagine what they would do if forest trees were felled. There is a great deal of logical and submerged reasoning.

**Individual characteristics of each peer-interaction continued .....****School-4****4A**

Paul 777

Adrian 656 [666]

Kim 333

This peer interaction had several particularities.

1. deducing and concluding with the use of 'so', and generalising
2. deducing with the the use of 'must be', 'must have'
3. hypothesising situations to illustrate and to make themselves understood, almost to the point of allegory
4. deriving conclusions from hypotheses, assumptions as well as facts
5. they use 'overall' and 'altogether' in their concluding statements at the end of the interactions and these are ended with conclusions with 'so'.

Both Paul and Adrian almost equally contributed.

Although Kim doesn't talk as much as the other two participants, but what she says is well thought out. Kim, makes interesting generalisations, deductions and conclusions.

The children move quickly from one subject to another.

**4B**

Christine 566

Daniel 644 [654]

Pat 545 [555]

Daniel begins the interactions with already defined ideas: he decides from the onset that both periods have advantages and disadvantages. This reflects on all three pupils' compositions. A great number of comparisons were made. However some of them have the following characteristic: one positive or negative side of an item in one period with a positive or negative different other item in the other period. So comparisons are sometimes tacit. The children have a great deal to say, and subjects change rapidly. However 4B are not as orderly in their ideas as 4A.

## APPENDIX 4.2

Mona Gélât  
M7148774

Stating opinions and supporting them by giving evidence, thus producing deductive utterances.

1C [Although the peer-group C children have produced a smaller number of deductive statements than the other two peer-groups, they nevertheless did model aspects of the genre in their talks.]

Jeff: [*inferential statement with 'because'*] I prefer the present times because we have / TV and stuff / and you you can watch better things // and nobody likes plays that much [026]  
//

Lily: [*inferential statement with 'because'*] er em / I don't like Tudor times because erm // erm they didn't wear very nice clothes

.....

Rachel: [*inferential statement with 'because'*] I don't like the Tudor times because / I don't really like plays // [*whispering heard*] I'd rather [*comparative connotation*] / sit and watching TV than watching plays

2C [stating viewpoint, substantiating it and employing inferential and hypothetical statements]

a)

Rick: [002] I think the 1940s / em / the 1990s is a better time than [*comparative*] the 1940s  
//

Stephen: why?

Rick: [*inferential statement with 'because' incited by Stephen*] because in the 1940s going on there was the war going on / there was the war / and people getting bombed on  
//

[*whispering, sign of awareness of the tape recorder*]

Agnes: [*double inferential statement with 'because'*] and I think the 90s is better than [*comparative*] the 40s because of the war / and because there were still rations going round  
//

[013]

Stephen: and I think the 1990s was a better place to live / because there were more homes to live in the 1990s because in the 1940s / there was the war / and / and all the houses were were being bombed in and it wasn't as safe as [*denotes comparison, contrast*] it is now because / we got a better defence unit [*three connected inferential utterances in Stephen's oral contribution here, using 'because'*].

4B [stating viewpoint and substantiating by using deductive utterances, Daniel uses 7 deductive utterances]

Daniel: [*three inferential utterances - two with 'because' and one with 'so that', one hypothetical utterance with 'if', followed by one inferential with 'cos' and another with 'as' another hypothetical with 'if', thus 7 deductive utterance in this turn-taking*] and I think [*reasoning model item (a)*] it's better [*reasoning model item (b)*] in the present [058] / because it's more organised by the government law and order / because in Norman times / the rules were just really unfair / but now in the present government / they thought of ways of making it fair / so that when [*'if ... .. would', reasoning models item (c)*] one was caught trials would be over in five seconds [*'whereas' missing*] now it would carry on for about three hours / and I think // well // Norman times are as good as well but the present's better / cos you can get a job easier / in Norman times you just didn't really have a choice [*elliptical: 'as' missing*] you just go literally just go off being a farmer / but if you were quite rich you'll [*'if ... .. you'll'*, *hypothetical*] probably be a knight or a Baron or something like [*such as*] that

## APPENDIX 5.1

### Nature of adult support and intervention [some examples]

Mona Gél

M714877

1C

Rachel: erm

//

// [8 seconds of no talk]

Rachel: [whispers something then talks aloud] do you know anything about the Tudor times or the present times ?

//

Adult: [reminding them of the topic question because they were really stuck there] which [period] do you prefer?

1C

[to encourage talk]

Adult: carry on

1C

[prompt after very long pause]

Adult: what about transport?

2A

[after pause, to remind topic question, to allow them to state viewpoint]

//

Peter: erm

//

[7 second pause, with Peter saying: 'erm' ] [174]

[a great deal of noise]

[Adult intervention after pause and to remind them of topic question and their having to state opinion]:

Adult: which do you prefer? [sudden bang of door is heard]

2B

[to get started: trigger talk that had not yet begun, so the topic question was reformulated]

Adult: would the 1940s be a better time to live in than the present time?

2B

[ to arbitrate: the children were talking too fast, each child saying a portion of what s/he meant to say]

Adult: one at a time

2B

[too much diversion, adult thought the participants should go back to the main subject now as time was running out]

Adult: let's go back to the second world war / I mean the period then the 40s and now / so you talked about evacuees / you talked about the rations / you talked about machines /about TV / high tech equipment / entertainment and clothes

Lee: what about books?

Adult: you decide [laughs]

Unknown: about health

Unknown: fashion

2C

[after series of long pauses, to induce them to state their viewpoints again rather than just describe]

Rick: and now you don't have [190] to put blackout paper

Stephen: yeah

Rick: black

Stephen: =curtains=

Rick: =curtains= on your windows / about seven o'clock at night

Unknown: yeah [sounds like Agnes]

Stephen: [very faintly heard] so the Germans don't bomb you [193]

Unknown: yeah [sounds like Agnes]

//

//

[whispering: 'read the question']

//

// [16 seconds of no talk]

Agnes: [198] oh yeah / in them days / they used to build houses / these flat pack ones you you used to build wall by wall // instead of bricks

//

[whispering incomprehensibly]

Stephen: [whispering] what are they called?

Agnes: [in reply to Stephen] called / Churchill houses [201] / weren't they?

//

[more whispering, something about the 'question' or 'read the question']

//

//

// [13 seconds of no talk]

Stephen: the / and / there weren't so many houses around then [206] be // because be like [for example] people weren't very rich and like they couldn't build them

//

//

//

// [10 seconds of no talk]

Rick: erm / and [but] nowadays / nowadays they have like good / good er good toys / and [but] them there were like just like dolls [suggests analogy]

Stephen: =models=

Agnes: =models ?= yeah

Rick: and where you could push the underneath and a man would pop

Adult: when did they play more games / then or now? [to induce comparison, rather than having them describe, especially after above pauses, and time was running out]

Rick: yeah

Agnes: yeah they played more games then

Rick: yeah / like [such as] chess and

.....



## Nature of adult support and intervention [some examples]

## 2C

[after 7 second pause, to remind or reformulate topic question]

Unknown: yeah

//

unknown: er

//

Adult: so say more about the second world war / life in the second world world war / life now

Agnes: well / it was very hard and they got free health though / after the war in 1945

//

[long pause again]

Rick: yeah / and / in the 1940s / in half of the 1940s / they have they had rations where they could have / where they could have a certain amount of food / and [but] now they / it's not on ration / [omitted 'because'] you can just go and buy it [070]

[to encourage responding to the topic question, pointing at the topic question on the slip of paper]

Adult: what's the advantage then and what is the advantage now?

## 3A

Anna: but in the Victorian times the horse and carriage was sometimes wasn't fast enoughCarrie: yeah / so they had to go along by canal

Anna: then they stopped using em the canal / and erm using horses to pull [274]

//

//

//

// [279]

[25 second pause, adult intervention is here necessary, time was running out]

Adult: noise / what about noise?

//

## 3A

[to encourage them to address one another: "do you agree ...?"]

[6 second pause]

Dell: the disadvantage of the 20<sup>th</sup> century is war like [such as] in Kosovo and when [because] they've been made to go out of their homes //

// //

[12 second pause]

Adult: do you agree or disagree? [to promote conflict and so that they would talk to one another] this is a debate

Anna: erm / I agree with Dell because / in the Victorian times / erm / we don't have as many war [denotes contrast] / wars and once they [.] in the 20<sup>th</sup> century they've got guns and ammunition and like Dell said er / erm in Kosovo / people had been forced out their homes // [217] so they have no where to live

## 3B

[directly requesting the children to talk to one another]

[So far the children have been speaking one at a time in regular turns from left to right -]

Adult: [to remind the children what they were to do]

.....a discussion among yourselves / if you disagree / you have to say to your friend that you disagree / OK? ...

**3B**

*[The children were not really keeping to the point, they were rather comparing both eras; the topic question was about 'human and environmental disasters']*

Cathy: in Victorian times [276] // like there wasn't all these things to do / so / you find time for things to do / this is one of the reasons that I find that the Victorian period is better cos the 20<sup>th</sup> century / they're getting game consoles and stuff / to [in order to] / like / entertain you / but the children spend too much time / like [for example] watching TV and playing computers / but in the Victorian times they didn't have these things / so they had to like [for example] / find different things to do / like [such as] playing games with different things and stuff

Adult: what has this got to do with the disasters of the question? remember to keep in line with the question / what about radioactive waste?

**3C**

*[to prompt new subject]*

Adult: what about fertilizers // chemicals they use in agriculture now?

## APPENDIX 6.1

**Example of examiners' presentation of global and analytic scores and my comments:**

**Mona Gélât  
M7148774**

Presentation of scores		My verifications	Corrections sent by e-mail
<b>School-2</b>			
Jenny	95	37/20/38	
Stephen	90	35/15/40	
Agnes	85	35/15/35	
Debbie	85	35/15/35	
Rick	85	35/15/13	[do not add up to 85] later corrected 35/15/35
Phil	80	32/14/12	[do not add up to 80] later corrected 32/14/34
Nadine	75	30/15/30	
Amber	70	28/14/28	
Lee	70	27/15/28	
Lynn	70	27/15/28	
Peter	65	22/18/25	
Karen	60	24/18/18	
Duncan	55	22/15/18	
Sally	50	18/10/22	
Lucy	45	20/13/12	
Ian	40	18/12/10	
Alice	30	11/12/7	
Matt	30	11/11/8	

**Signatures of both assessors**

**APPENDIX 6.2**  
**Children's written arguments**  
**School-1**

**Mona Gélato**  
**M7148774**

**Cara[contr] rated 60%**

*I would like to live in the present because in the Tudor times you wouldn't have a very good education, but in the present you have schools.*

*I would not like to live in Tudor times because you have to go out and forage for your food, but in the present you could just go down to the supermarket.*

*You wouldn't have very fashionable clothes in those days either. You also wouldn't have heating in those days, you would have to go out and look for fire wood. I would only like to live in Tudor times if I were rich.*

*You wouldn't be able to choose who you wanted to marry because your father would make the decision.*

*People in Tudor times had very bad temper some people were killed on purpose but rarely people in the present don't get killed on purpose.*

*In Tudor times the living conditions are quite appalling compared to the present and there would be lots of disease going round and you wouldn't be able to wash properly and you would begin to smell.*

*I don't think that you would be cared by your mum or dad. People would treat you badly and your mum or dad wouldn't take much notice. That is why I think life would be better in the present for me.*

**Colin[exp] rated 95%**

*Tudor times and the present*

*I would definitely prefer to live in the present because we have a lot of luxuries that weren't possible in Tudor times.*

*For example we have buses, cars, bicycles, trains, subways, ships and aeroplanes and helicopters. Whereas a peasant was lucky to have a decent pair of sandals, let alone a horse and cart.*

*We have better entertainment too like television games consoles and a lot more, but they had to go to a theatre.*

*We have nicer and more tasty food and drink than most Tudors (unless they were rich.)*

*In the present the average person lives until they are about seventy or over whereas because of their appalling way of life one in ten Tudor children would live to forty.*

*The problems nowadays are things like nuclear weapons, pollution, global warming, and other things like that whereas in Tudor times nothing like this was a problem.*

*But, in Tudor times you could get killed for almost no crime at all but now we are only put in prison for bad crimes apart from a handful of states in the U.S.A. In Tudor times if there was a Protestant King or Queen and you were Catholic you could get executed, or worse.*

*Now we have more comfortable beds, but in Tudor times you were lucky to get a bed, some people would have to sleep on straw or even the cold floor, but Kings and queens would have splendid king sized beds but they would cost a lot more than beds now.*

*On the whole I love living in the present with our food, clothes, sports, cars and all our other fabulous technology but I am very worried that we may spoil this world with poverty, greed, war, carelessness and even our own technologies.*

**Appendix 6.2 continued.....**

**Penny[contr]**

*If I had a choice of living in Tudor times or living in the Present, then I would definatley choose the present because In Tudor times you were forced to marry somebody that you didn't love or perhaps you hadn't even seen or heard of before wheater as now you pick who you would like to spend the rest of you life with and another example is now days and in the present we have a bigger selection of sport like football, tennis and ice hockey or hockey but in Tudor times they didnt have such a big selection and even though they had football they don't have it like they do today.*

*Some more examples is that the Tudors didn't have electronic gameboys or playstation and even though they had differences they did have some school but Tudor times schools weres stricter you didn't have play grounds and games to play, and didn't have as breaks you just had to work hard all the times. Also when you were a baby you didnt have rattles or babys dummies and you didn't have cuddly toys or board games and you surtanley did not have micra machines.*

*Amother example is the Tudors clothing because mow says you have more fashnabell clothes then and you didn't have addidas and nike in those days you wore frilly frocks and dresses. And my last reason is that I perfectley like my life style here and thats why I wont to live in the present.*

**Jeff[exp]**

*Tudor Times or the Present*

*I would rather live in the prest time becuase there I alot more things to do for example Television and computer games well as In The Tudor Times They only had Toys like skipping ropes ect ect. I dont like the way In the Tudor Times If you did something wrong you would probubly be exiccited well as now days you would go to Jail. The Medication in the olden days wasent very good For example If you poked your eye quite badly A docter wouldent do anything about it and if they did it probubly wouldent work so your eye would get infected and you would be blind. Also there were alot of desieses around like plaige Well as now days there arnet as many deiseses around and there is more medication. The Tudor clothes were horrible espeshiliy the women who wore Giant dresses and put egg whites on their Faces to make themselves look white. Like Elizebeth who in picteres looked realy white. Id rather be In a war in the olden days rather than now because In Tudor Times They had less guns which were weaker and took longer to load and had about a 40% chance of not working. So if someone was aiming at you There would be a 40% chance that It Wouldent Shoot. Tudor Toys wernet very good as I said at the Top of the paper they were like skipping ropes and hoop and stick wellas now days we have televishions and Game consoles and water pistols. The rich Tudors used to eat horrible Food and the poor people used to make their own Food like bread and stuFF well as we eat Pizza and chips on ocasions. That Is why I think present Times is better than Tudor Times*

**APPENDIX 6.2**  
**Children's written arguments**  
**School-2**

**Mona Gélât**  
**M7148774**

**Phil[contr]**

*1990's*

*I think the 1990's were better than the 1940's. There are some bad things about the 90's and some good things about the 90's. The bad things are there is lots of traffic around so if you are playing in the street you have to keep getting onto the pavement and it gets in your nevr's a lot.*

*In the 40's you would play out a lot better because there wasn't much traffic around. In the 40's there was the war, but only up to 1944 or 1945, then it stopped. In the war a lot of food, was rasheded like sweets and butter.*

*After the war some people who were kind of rich had got a black and white T.V while all the normal People had wirlesses. Nower days we have coulerd T.V-s and I think (there)x they are a lot better.*

*There was a vey good think about the 40's, it was a LOT quiter and a lot more picefull. In the 90's it is a lot nosiyer but I still think the 90's is better just though!*

**Jenny[exp]**

*1990's*

*The 1990's I would probally choose to live in because the we wear today are different, so is the food, the money, the medicane ect. Today we have copys of football shirts and brand names like adidas, Nike, rebok, and so one. Then you would of worn dungarees and a t-shirt dresses, the colours wouldn't of been fluorescent green they would of been dull pinks, blues, yellows, brown s and black s.*

*The food would have been different today we have alot of fried food and fast food shops then they would of grown food and made alot of food types themselves. During the war there was a period called rationing. You couldnot just pop down to Asda and buy a loaf of bread when you need one. It was an ounce of butter 1 egg 1 pint of milk if you think what we eat and drink there is alot of difference. We 'ed probally go through a pint of milk a day because people have milk in tea and coffee.*

*The medicine was very poor they didnot have vitaman A - Z tablets like we do. You would not have Plaster casts if you broke your arm or something. They didn't have all these hi-tech machines to see if your blood presure was high or not.*

*The polution then was not as bad as it is to day. there weren't as many cars around to pollute the air.*

*Violence is worse than it was then. The IRA bomb places for no apperent reason. Violence wasn't as bad because people were probally still recovering from war. Nowerdays people are murdering, injuring people because they can't get there own way.*

*People weren't as racest as they are today. The Stevan Laurence case is appalling. He got murdered because he was black. My conclusion. I think I would rather live in the 1990's because theres more things to do than just play ball and stuff. If I hadn't of herd of computers, play stations and Nintendo's I would of be ok. but I have herd of them so I could not live without them.*

**Appendix 6.2 continued.....**

**Duncan[contr]**

*The 1990s*

*I like the 1990s better than the 1940s because unlike the 40s there is no bombing and no fighter planes in the air. Also I like going swimming and playing football at the lesiure center an summer holidays. I like playing in the park playing football and climbing trees. When I am hungry I like going to Mcdonalds. I like racing to.*

*There are also bad things about the 90s there is more polution and more violance, and violation of the low. People donot help each other out. There is more fatning food like junk and fast food but some of its nice. There is also polution from the landfills. A part from all that I like the 90s better.*

**Agnes[exp]**

*1990's*

*The nineteen nineties is better because it has more entertainment, and more Job's, than in the nineteen fourties.*

*In the ninteen fourtie's they didn't have a lot of food, because it was being rashioned. Nower day's we have more luxurie's like chocolate a meat, bread and butter.*

*Nower day's we have a lot more cars than they did in the nineteen forties, and that makes more traffic and that make's polution that damage's the ozonelayer.*

*also in the nineteen fortie's they didnt like black people. I think that they should be treated the same way as us I think were just the same.*

*also then they had no computer game's So they would play chess, and if your lucky you would have a train set. girl's would have, one doll and if your really lucky you would have some chocolate or money.*

*In them day's they had, tv but it was only black and white and it is better now because we have colour tv and computers and cd player's, we have alot of pop music not like they did. They had music like glen miller in the mood. They would, play that in the air raid tunnel's, to make people happy they would serve cups of tea, in the air raid tunnels.*

*They had bed's in there anot benches they, would take turn's and there were toilet's there. I think the ninetie's are best.*

**Georgina[contr]**

*Victorians have very dirty factories the workers had very poor wages. They did not have clean floors like we do in the 20th Century. Now a days there are still pollution as they was in the victorian times. The environment is still not as clean as it should be. Like if there was a oil leak the oil would spread across the sea and the fish would get sick and so would all the other animals in the area.*

*In the 20th Century the wages are much better and they did not have to start work until they were adults. But in Victorian times started work when they, were six or seven. The boss normally beats them if they don't work.*

*In victorian days they were not payed alot of money. In the 20th Century the normal amount of money which is payed is £3.60 an hour.*

*They did not get lunch breaks, tea breaks or dinner breaks. The food was not very interesting they had porridge, bread and cheese, water for there drinks. In the 20th Century they have tea breaks, lunch breaks, or dinner breaks. The workers bring there own pack lunch, to work with them.*

*I would prefer to live in the 20th Century because we do not have as much hard work and you get payed more money. You also have a clean building and better food to eat.*

**Shaun[contr]**

*The conditions for working in the victorian times were long, hard, smelly and dangerous. The conditions today are a lot better because they are clean, not so dangerous, not so long shifts. The environment was smelly and poluted. The enviroment is not so bad now but the only problem is, is there are more vehicles and that means more pollution. The diasters now seem to be worse than the ones in the victorian times. The diasters now are like plane crashes car crashes, boats sinking, oil spills, tornados. There are a couple of diasters that are the same like land slides or factorys catching fire. The diasters in the victorian times were quite dfferent like people catching deseises of rats and mice or like people killing themselves by accident in the factorys dangerous machines. The pollution in victorian times were like acid rain. The roads in victorian times were just muddy tracks leading to nowhere. Not like ours concrete and metal barriers to stop cars ploughing throuhg fields or streams. The transport then was barges and by horse and cart and there was not much pollution with that type of transport. Our transport is Cars and trains, planes boats and lots of other things that pollute our air. We have big moterways and the victorians had only tracks with big rocks and holes were cart tople over and things. The victorians used to have bridges but not very good ones because they had no rails to hold. Some bridges had the little streams that the barges go along so they dont go down waterfalls. A drunk man had once fallen off it and it was a high bridge and he then died. There are less and less factorys now and it is a bit fresher.*



**Emma[contr]**

*I think it would be better to live in the 20th Century. This is because, the Victorians didn't get paid much. Also because they got a bit of blue porridge. They also had a lot of factories which were very dangerous, because of the machines. In the Victorian times they had a lot of pollution. Such as dirty things like rats and sewage. They didn't have a good environment.*

*The good parts were that they didn't have cars so that the smoke was not polluting. In the 20th Century and Victorian times they had a lot of things that were the same and polluted the place. Such as oil and things like factories. The Victorians had quite a lot of disasters, but not much. The Victorians had quite a lot of damaged environmental disasters. People also had diseases because of their environment.*

*In the 20th Century most people are okay but just some have diseases. In the 20th Century there are a lot of factories that pollute. Also they have petrol, which goes into cars and it pollutes. They bring out fumes. People who work in factories do get paid a lot. They get lots of food and good clothes to wear. The environment is very good (it's okay). Then still the 20th Century does have a lot of pollution. Like the Victorians who had not a good environment. But a lot of pollution. I would prefer the 20th Century because of the conditions that people lived in and the environment is very good. Although there is a lot of pollution. But still in the 20th Century we do have a lot of litter and rubbish which makes the environment not very good.*

**Arnold[contr]**

*In the Victorian times there were many pollution problems such as sewage in the middle of the road. Also there was a lot of sickness and unhealthy people.*

*The housing was also very poor and people suffered the inside of the house was very small and every house was the same. No light could get through seeing that the house blocks were high up no light could get down.*

*The working people also worked in very poor conditions and were paid very little for it. Also in the mines working down there was a real risk because anything could fall in and cause a hazard. Many people were killed or hurt working in the Victorian times.*

*The woods and trees in the environment were also damaged as trees were being cut down to sell on the market so the environment was damaged there. Also by trees and woods being cut down it caused land slides and there for damaged the environment too.*

*Also the pollution of trains running through important towns and cities caused pollution.*

*Living in the 20th Century is also quite dangerous.*

*The housing in the 20th Century has improved a lot though and all houses around England have more than one room which is more than what the Victorians had. Also we now have our houses how we want them and we are not so cramped together now either we also don't have the pollution running through the streets.*

*The working people now have better conditions but still is quite dangerous but do get paid a fair amount now.*

*Some of our land is protected so trees can't be chopped down but some woods aren't.*

*The problem of pollution now are cars on the road which let off fumes and pollute the air. But I think I would still prefer to live in the twentieth century what I live in now.*

**Darren[exp]**

*I think it is better to live in the 20th Century because they have doctors to cure illnesses, but in Victorian times there were hardly any doctors and they didn't have very many cures. And the people nowadays have jobs we all like but in the Victorian times they mostly worked in factories and the conditions were very very poor. They didn't have healthy food and the rules were so strict, you couldn't even look out of the window. Many people died because of overworking and food poisoning. That was a human disaster. And all the sewage from toilets flowed into rivers which people drank from. Rubbish was also thrown in there too. So that was a human and environmental disaster in one. But nowadays (20th Century) all sewage goes to the sewage farms and is kept there. In Victorian times many great inventions were made. Such as the flushing toilet, steam trains, disinfectant, lots of things we take for granted today. But also guns and weapons were made, which was the downside of it all. So mostly, it made us happier. In the 20th Century, electricity was found as well as solar panels, electric irons and vacuum cleaners which all made life a lot, lot easier. But of course there's always a downside which was the inventions of cigarettes, cocaine and heroine which are all addictive and bad for you, causing a human disaster.*

*Luckily, the environment is doing well, because of the green belt which protects the land from having any buildings built there. But in the Victorian times the environment was spread out all over Britain, with only a few major cities. Nowadays there are more entertainment facilities than the Victorian times and it is a lot cleaner.*

*final remark:*

*The 20th Century is a clean happy place with not so many disasters, but in the Victorian times it was smelly and dark, with a lot of human disasters.*

**Jane[exp]**

*I think it would be better living in the 20th Century because factories now have fencing around it which makes it safer for little children.*

*In Victorian factories children started work at the age of 6 years. It was dangerous for them as when a machine broke, they had to fix it. This was done by climbing on the machines.*

*Children, nowadays can sometimes breathe in the smoke, which can lead to lung cancer, then heart disease, then death. But this serious case of illnesses, happened in Victorian times too.*

*The factories children worked in were really dangerous. They got up at 4.00am and finished about 11.00pm. Because of these early starts and late finishes, the children and adults could start getting really hyperactive, which could then be lead to shooting the factories which lead to death. It seems like everything leads to death.*

*Factories are usually built near rivers, so they can empty their waste down little tunnels ending up in rivers. This can be harmful to fishes and other insects and creatures living in rivers. As rivers lead to the sea, all the waste is going to effect the sea as well. So when little children, and adults go swimming in the sea they are going to be polluted too.*

*Even though I made that statement, I still agree that living in the 20th Century is better.*

*Victorians treat you really badly. If you looked out the window, or were caught taking a nap, you would have to be whipped. If you did it again, you would probably be expelled, and that means, no money for the family. The family couldn't buy food, so they would die.*

*The 20th Century people are much more sensible in factories now. But teenagers can be stupid enough and go and wreck them.*

*I don't want any more factories to be built, we've got enough.*

*Pollution from cars can also damage the environment, and badly too! This pollution, will mix with the pollution from the factories and damage the environment even more.*

*Victorians treat you too badly.*

*20th Century people are fine. 20th Century is much better for me. I will not change my statement.*

**Appendix 6.2 continued.....**

## **APPENDIX 6.2**

### **Children's written arguments**

#### **School-3**

**Mona Gélât**  
**M7148774**

**Cathy[exp]**

*The 20th Century is better because its much cleaner and healthier. In the Victorian times it was dirty and very unhealthey.*

*20th Century*

*The 20th Century has alot of pollution and fume 's because of rubbish dumps and factorys.*

*There is alot of war going on now in places like Kosovo.*

*There is not many fields left in our area because people are buying them then building house 's on thes.*

*The Victorian era*

*The Victorian era was very dirty because people caught dease 's very easily from things like food, water, the rivers aswell because people threw rubbish in the rivers and then drank from them.*

*Some factorys made children work in places were adults couldn't get to. Their wages were probably no more than a few shillings a week.*

*There were a big percentage that were poor in those days and a small percentage that were rich.*

*My Conclusion*

*I would rather be in the 20th Century because its clean, orgainesed, healthy and very easy to live.*

*Its clean because its got vaccinations and doctors to help you.*

*But its bad because of war and pollution.*

**Anna[exp]**

*I think that the Victorian period produced more human disasters than the 20<sup>th</sup> century period. But the 20<sup>th</sup> century period causes more environemntal disasters, such as things the smoke, pollution and rubbish kill small animals and plants. The Victoriam period caused many human disasters, like making children work in factories and mines, and in factories and mines the children could get beaten and even killed.*

*The advantages of living in the 20<sup>th</sup> Century are: you can get to places quicker using cars, trains, aeroplanes and ships. But the disadvantages are that more vehicles ae being invented so this causes smoke, gases and noise pollution. More airports are being built and houses are built near them, and many people get annoyed about the gases and the noises. Many people get forced out their won homes and villages.*

*The advantages of living in the Victorian times is that there were less environmental disasters because there were less factories and so less gases, smoke and pollution was let out. Little plants and animal died many of the fields and the countryside was saved. The disadvantages of living in the 19<sup>th</sup> century are that there was a lot of human disasters going on and many children died from working in factories or getting beaten. Also it was a slow process getting around because there was only by foot, the canal and horse and carriage. also diseases were spread.*

*Many children nowadays don't have to work, but in other parts of the world children have to work in ammunition factories. There is more pollution and smoke now than there was before.*

*Altogether to conclude I would rather live in the 20<sup>th</sup> century because you are not forced to work. Although there are environmental disasters there are less human disasters. There are now vacinations to stop pollution spreading disease to our babies.*

**Appendix 6.2 continued.....**

**Judith[contr]**

*Which of the two, the Norman times or the present, would be a better place for you to live in?*

*I think that it would good to live in the Norman times because there would be no pollution from cars spoiling the atmosphere. There would be more trees and wildlife because they would have more space to live in , no M25's or motorways for them to get run over on. No one would live near noisy, busy roads because there would only be cart tracks with the occasional farmer or pedestrian walking along.*

*There would be some negative sides as well like not that many doctors and medical attention. if you were a farmer and lived away from all the shops you would have to travel for hours just to buy sugar or honey. But you could grow your own organic produce not that there would be many pesticides back then in the past, but it would be a help now if you could grow organic food yourself.*

*Life would be very, very good if you were the King or a Tenant In Chief (Baron) and not so good if you were a peasant. It would be appalling to be a slave having to wait on your master or mistress hand and foot all day long and still get caned or should I say beaten.*

*If you were a slave you would receive next to no food and if you fell ill because of it you would get hardly any medication and if you did it wouldn't be up to much, they would probably make you worse and eventually kill you.*

*But I think it would be nice to have certain things from each time.*

**Dick[contr]**

*I would like to live in present times rather than Norman times because in norman times there were many illnesses and diseases that could not be cured, were as today you can have special treatment to be cured from them. In Norman times most people were under slavery but now nearly everybody is a free bird. today there is more people without homes but thats only 1 disadvantage! in the norman times people gave unfair ways of finding out if people were guilty or not but they are much fairer today. In norman tines the houses were cold and draughty unlike todays central heating systems. Many people were executed in those days. The pay rate was lower in those days. In those days you had to walk, ride on horseback or by ship. today we have sterners cars and planes. In those days everyone had to fight for at least 40 days a year. Today we choose to fight and we can use long range weapons unlike swords. There were not many schools in those days and people didn't have much money. Reading and writing were also rare gifts and the kings were cruel. War was a common thing but today although, there has been in Kosovow it isnt today. Crime was more common in those days and things like vermin could break out easily! And those are my reasons of why it is better to live in present times.*

**June[contr]**

*I would much prefare to live in the modern times. I would like to live in the modern times because it is a happier place than the olden times. there is a much higher chance of living in the modern times. Because in the Norman times if you did something very wrong you would be put to death. When there were no cars you would have to get from place to place by walking or horse back. It would take a very long time. But now days it would not take very long because of aroepplanes, can and bikes. if you wanted to go to a different country you would have to to by sailing boats as there was no such things as engines. it could take about a year to get from England to a place out of Eeurope. In the old days there were rules that were way too strict. To test if you were guilty or not in court, you had to hold a red hot poker. If there was a scar then still after 3 days you could be killed. Another test was too fight and another was to swear on the holy cross. Now days if you did something wrong you wont get killed.*

*These days the medicane is much better and if you had to have an operation you would be put to sleep. But in the Norman times you would have it awake. If you had a deiase in the Norman times you would die. But now days if you had a deiase you could be made better by doctors and medicane. In the norman times you had to make your own food or grow your own food. There for now days you wuld go to a supermarket and buy your food.*

*Education in the Norman Times was nto very good. there were only schools for boys and the girsl had to stay at home. They didn't have papper and pens to write and draw with. The only way to find out about the world was to visit the place where you worked to find out about . But now days you would just turn on acomputor and type where you want and it will tell you all about the place.*

**Sandra[contr]**

*I am writing an essay about what time I think would be best to live in Norman times or Present. Personally I would prefer to live in the modern times (now).*

*Then you were ruled by people higher than you like the barons were ruled by the king and the knights were ruled by the barons and the slaves were ruled by the, knights. There were 3 types of slave: The freemen who owned land and money, Vilains who owned land and money and serfs who didn't own any money. Where as now the law is much better you only get ruled by the king and one person is no lower than any other.*

*Health in the Norman times was quite poor. they only had herbal remedys and not tixylix or nurofen. they also didn't live as long they had short lives or long.*

**Jeremy[contr]**

*I am doing a essay to say if I would like to live in normans or modern times. there are better doctors so that we live for longer and we doan't get ill so ofthen as in normans times if you were ill could not get cured so often.*

*Now we have good home's we have sewer's because they did not have sewers so it allways stunk in normans times, and they only have small hut made out of wood and stones.*

*In moden times we have nuclear wepons to defen the countre that you are in.*

*Now're days we have pets like cat ect... but then they had birds like falcons which are rare now but then they had wild animal like wolvs so you could get ataked more often.*

*I think I would live in modern times.*

**Linda[contr]**

*I have more of a choice of a modern day rather than a olden day choice. In the olden days you had to be ether a baron, knight or peasant. But most people did'nt have a choice of being anything. The king was the chief then there was the barons then there was a peasant there where two types of peasant wich one was called a freeman and the other a surf. A freeman had a pice of land and he could go and see his family when ever he wanted. on the other hand a surf was never allowed out of his working plot or out of the barons land because he was going to try and be a freeman. The feudal system was the way law went. If a peasent accused another peasant of stealing his chicken or something like tht he would have to go to court the tryals where unfair. The bad thing was that if you caut a deses you would have to etheir live whith it or die. But nowadays you have much more fairer tryals than them. If you have money in you pockets now then you are sure to survive. We have more medical reachearce than anything else. If you have a tropical disece then doctors will cure*

**Paul[exp]**

*I think that the present is better because the government is better because it is more powerful so it can build lots of hospitals so there are less dead and ill people.*

*The hospitals are much much better because if you have a bad cut they can stop ti getting infected by giving you an injection or some medicen but if it were the norman times the doctors did not know enough about cuts and medicens so they would just cut it off or leave it.*

*It was also more dangerous because there were more desises especially with animals because ships could get animals that have revies or other disiasas.*

*The education is better because the teachers know much more.*

*If I went to norman times and I told people everything I know I would be considered a genius. The government has better ways of punishing because if you do something wrong they fine you or they put you in prison and after a while you stop doing bad things and they give you another chance, but in norman times they would cut off the arm you stole with or they killed you. The good thing about the norman times is because there is harder punishments there might be less crime, because there is better education people can find new things out and make new machines and medcens.*

*The landscape was better in the norman times because there is more trees and there was no pollution like exaughst but they had more trees partly because there were less people so there was less houses made of wood to build. The rainforest was 2 or 3 tines bigger than it is in the present times but that was because the normans did not know about the rainforests.*

*The wars last longer now because there are guns and many more people, but there is Nato wich can stop wars, because if Brazil started to try to invade Africa Nato would stop them by helping Africa fight back, but we do know how to make nasty bombs like Nuclear Bombs.*

*We know about bad drugs now like nicatine and we try to stop them but smugglers try to sell bad drugs for very high prices, the police try to stop that but it is very hard to stop them. There is a drug in cigarets but it is not too bad a drug so the police let them smoke cigarets. Overall I think that the present time is better.*

**Adrian[exp]**

*I would prefer to live the present time because there are more hospitals, this is good because if you have an illness or a problem with your self the hospital can make your illness or problem better. For example if you brake your leg in modern times the hospital will put your leg in a cast and then they will wait for your brake in your leg to repair its self. But if you broke your leg in norman times the doctor would probaly cut off your whole leg! Also the tecnology is better. For example your can phone a friend in Australia, in norman times you would have to write a letter , get on a boat and sail to Austrlia. But the good thing about Norman times is that there was world peace well not exactly tut it was near enough, for example you did'nt have Germany sending bombers to England and bombing london killing loads of Civillians. I think that also the houses are much better now than they ever have been, they are much warmer because of central heating and they more heather because if you have a fire in a modern house you have a chimney. If you have a fire in a Norman house there was only a hole in the roof, this meant that smoke could move round the house and if you inhaled to much smoke you could die! There is much better education system, there are more schools now e.g. Eton, Sevenoaks, Radly and there are some excellent Universities e.g. Oxford, Cambridge, Manchester and many others. But people have invented things that kill lots of people eg. drugs there were not any of these things in Norman times which was good but also drugs can save lives if you are seriously ill. But after all I would prefer even with its down points I would like to live in the present.*

**Christine[exp]**

*There are good things and Bad things about both present and Norman times. The good things about Preasent is there are things like electricity and batteries. This means that we can enjoy more things like game boys and Play Stations. We can also have better light. We can use lamps but they had to use candels.*

*We can also have rides on rollercosters which is fun.*

*In Norman times it would be nice contry side and not polluted. Because we have big factories now that they did not have the big factories and pollution into the air.*

*The bad things about living in Norman tines is life was not fair. If someone did something wrong the would get killed or banished from the country. This was not fair because someone could have been inesent. Also their was slavery. You could get wiped and striped if you did one thing wrong. There was not any central heating.*

*The good things are that thing were peace full you would not have someone comeing and dropping a nuclear bomb on you.*

*I would prefer to live in the presents because of all the advantages. I would not not mind living in Norman times but they do make children work which is unfair.*

**Daniel[exp]**

*I think they are both as good as each other they both have the same amount of good things and bad things. the good thing about the Normans is that there si no pollition, no planes to bomb countries, the landscape looked a lot better because there were no chalk mines, no power plants. The time that the Norman invaded England had only one million people compared to today there are four million people just in london. The water is a lot cleaner because people could wash their clothes in it, and no sewage got into the water compared to the Thames. In norman times the law and Order in England was out of order they had silly ordeals which gave accused person no chance to defend himself against the trials. the people in England in the Norman times would have to catch their own food make their own bread and educate their own children.*

*The present has lots of advantages and disadvantages, such as pollution and nuclear weapons, crime and vandalism. The good things are that children can get an education, you can get to some where quicker, by using the railway, cars, buses, planes. So that you can get to places so much quicker, like flying to Australia, it would take a plane about nine hours, but it could take a ship two years. In the present we have electricity which helps us a lot with because it turns on most thing (gives it power to work properly). Houses in the present are so much better and with electrical appliantes which work things like vacums, computers, televisions, kettles, microwaves, ovens, video games, gameboys and lors more.*

**Pat[exp]**

*In the present we have more advantages like elctricity, clean water and medical service. In the norman times you did not have these advantages also we have a lot more food to choose from the normans just had the basics like fish, meat and veagtables. You couldn't pop down to safways and buy a tub of ice cream because they did not have the ability to do that But they had hardly pllution that shows how much we have wrecked the planet. They did not have fast transport all they had was wooden boats and by foot, to get to Austrailia it would about 3 years. We are destroying the planet not just by pollution but by litter, logging and cutting down rainforest. The crime and vandalism is much worse than in the norman times people did not do as much crime and probaly never herd of vandalism. There is also law and order I the norman tines you would be punished and you wuld have very short trail but nowadays you would have a trial about three hours long and be fined or put in prison but in the Norman tines you wuld be put in prison or hanged! I think the present is better because we have advantages but the pollution is getting higher and the greenland is getting smaller every minute.*

**Kim[exp]**

*I think living in the present is better than living in the norman time because if you are ill you can go to a doctor to help you. And you cane get injections that protect you from desisez.*

*But in the norman times you couldn't rely get help you would just die. And in the presant there is better edjucation, better houses, better food. And in the norman times there were very poor houses, food was poor and poor education. And in the norman times they only had swords and sheilds, and spears. But in the present they have loms, and pistols, and gets and everything.*

*So I think the present would be better so if you were being attacked you could call the police and they'll help you but in norman times you wouldn't have anyone to help you you would just be killed. And the houses in the preasent are much safer because there strong and the doors bolt lock.*



APPENDIX 6.3  
Reasoning in written text at micro-level [within the clauses]

Cara [contr]

“because”

“but”

“because”

“but”

“would have to go” [conditional **would**] such as =if you lived in Tudor times, you **would have** to go.....

“could” [hypothetical **could**] “You could just go down to the supermarket [if you wanted to]

elliptical, “if you wanted to” missing

ellipsis: missing “so” “... wouldn’t have heating in those days, [so] you would have to go out and look for fire wood.”

“if I were rich”

“because”

“but”

“compared to the present”

XX “probably” = properly [spelled wrongly]

“and” = so

“I don’t think....”

“That is why” = this is the reason why, for this reason

“I think”

“better” comparative

Cara 16 [other instances, “would”= likely to, not deductive]

Colin [exp]

“perfer” = prefer [comparative connotation]

“because”

“for example”

“Whereas”

“let alone” [hypothetical connotation]

“better entertainment”

“like” = such as

“and a lot more” [comparative]

“but

“nicer”

“more tasty..... than”

“unless”

“wheras”= whereas

“because of”

“like” = such as

“like that” =such as that

“whereas”

“nothing like this...”= nothing **such as** this [denotes comparison]

“But”

“you could get killed for [if you committed] almost no crime at all” hypothetical  
for = [if you committed]

“but” = whereas

XXX“apart from” = except for = with the exception of =excluding [NOT COUNTED]

“if..... could” hypothetical

“some people **would have to** sleep on straw or even the cold floor” {“since there were no beds,” or “since they couldn’t sleep anywhere else, some people **would have to** sleep on straw.....} [deductive in meaning]

Appendix 6.3 continued.....

**APPENDIX 6.3**

Mental Reasoning in written text, Colin[exp], continued.....

**Mona Gélât**  
**M7148774**

“**more** comfortable” [comparative]

“but”

“but”

“...cost a lot **more than**...”

“On the whole” = same as “in conclusion”

“but”

“may” = might

**Colin 30**